

LOS ANGELES MUSEUM
EXPOSITION PARK

THE HUNTING & SPOOR
of
CENTRAL AFRICAN GAME

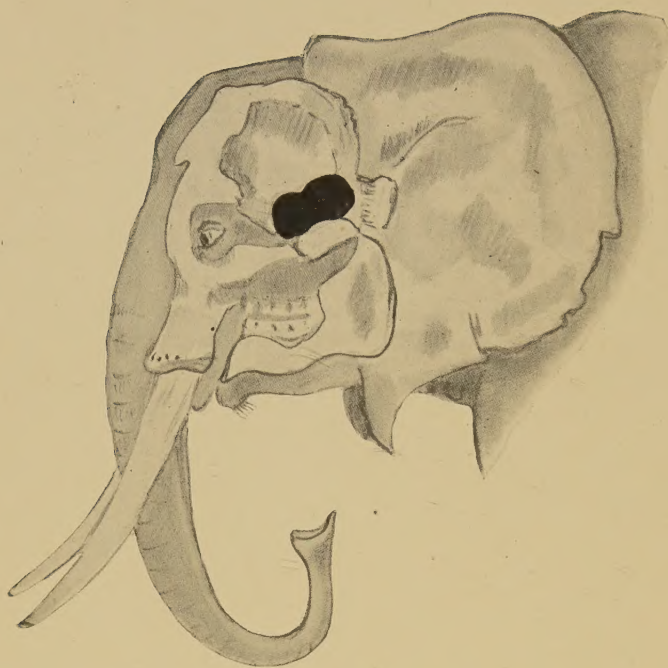


PLATE I.

THE HEAD OF AN ELEPHANT, WITH DIAGRAM OF SKULL.

The black area shows the position of the brain. Elsewhere I have seen this organ shown as if it is nearly round, but I believe the sausage shape drawn above to be correct. This rough sketch is a guide for the brain shot.

The
HUNTING & SPOOR
of
CENTRAL AFRICAN
G A M E

With life-size Illustrations
of most of the
G A M E T R A C K S

By Denis D. Lyell

Author of "Wild Life in Central Africa"
"The African Elephant & its Hunters"
&c. &c.

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LOS ANGELES MUSEUM
EXPOSITION PARK

Printed in Great Britain

To the Memory
of my nephew

Fimmie

Sec.-Lieut. James Lyell Tombazis, D.S.O., M.C.

2nd Batt. Sherwood Foresters (old 95th Foot).

Killed in Action at Bohain, near St. Quentin,
on the 8th October 1918. Aged 19 years

"The thundering line of battle stands,
And in the air death moans and sings,
But day shall clasp him with strong hands,
And night shall fold him in soft wings."

From Julian Grenfell's "Into Battle"

PREFACE

ALL the tracks shown in this book are life-size, except those of the elephant, rhino, hippo, and giraffe—the former being given one-third, and the three latter half-size. It is difficult to portray spoor on paper, for it must be remembered that the vast majority of game tracks are imperfect impressions owing to the hardness of the ground and their being over-trodden by other animals. Thus those shown are well-defined specimens, so as to help the beginner to identify them.

The best thing a young man can do if he wants to know what a certain animal is like is to go to some good Natural History Museum and examine a well-mounted specimen of the beast, which will give him a better idea of its size and morphology than any illustration could possibly do.

I am indebted to *The Field* for permission to draw on my writings in "Central African Game & its Spoor," which was written by Major C. H. Stigand and myself. Major C. H. Stigand, to the regret of his many friends, was killed on the 8th December 1919 in an Aliab rising in the southern Sudan. Had he been alive to-day, I have little doubt that this volume would have appeared under both our names. He was an acute observer of all that pertains to hunting and the natural history of African game.

I have to thank Messrs. Rowland Ward for permission to use the drawing of an elephant's skull from the late Arthur H. Neumann's

Elephant Hunting in East Equatorial Africa. This has been slightly enlarged.

Before concluding this Preface, I would like to give the beginner a few words of advice as to the conduct he should practise in the hunting-field. The best comments I have read on the subject are contained in the List of Members of the Shikar Club, under the heading "Objects," which run as follows :

"To maintain the standard of sportsmanship it is not squandered bullets and swollen bags which appeal to us ; the test lies in the love of forest, mountain, and desert ; in acquired knowledge of the habits of animals ; in the strenuous pursuit of a wary and dangerous quarry ; in the instinct of a well-devised approach to a fair shooting distance ; and in the patient retrievè of a wounded animal."

Surely no better code than this can be assimilated by any one, for it contains the real spirit of true sport.

BELMONT, MOFFAT,
DUMFRIESSHIRE.

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Fair Hunting

AT the end of my Preface I gave a quotation which I hope will convey to the young reader the ethics which should influence him with regard to shooting wild game. The word "sportsman" may mean much or nothing, and it is certainly a synonym which is sometimes misapplied. Most people use the word as meaning some one who plays the game, so we will leave it at that.

In hunting game there are different methods which can be used, some being fair and others not, so I shall try in this chapter to show the novice how he should behave in the hunting field, and I am sorry to say that it is not only tyros who need advice in this respect, for many older people often behave disgracefully.

The modern magazine small-bore rifle is capable of killing any animal, but it is also a weapon when improperly used which can cause much wounding, and therefore suffering. Apart from the weapon and its manner of manipulation there are methods which call for some comment.

One constantly reads of people who go after game in motor-cars and shoot from these vehicles. This may be possible along well-made roads, but personally I have never seen land in the African colonies I have hunted in where a man could chase game in a car across the veld. I certainly do not think it is wrong to use a motor-car to get to a shooting place, for people do this in Britain and other countries. The fault in the use of motors is when one

attempts to run game to a standstill through the great power of the machine, and such an action can only be described as heinous and most unsporting.

I have heard of a case of some young airmen bombing a herd of elephants from an aeroplane. This, again, is an atrocious action ; and if the young men had had a crash and broken their necks, I, for one, would have not felt a bit sorry for them.

When hunting in Central Africa I never once gave a native a rifle to go after a wounded animal, as I have heard of others doing. In such a case the native, instead of trying to recover the crippled beast, is more likely to try and shoot something else.

The old hunters have been accused of butchering game, and they may have killed more in some cases than would seem justifiable to-day when many species are getting scarce. It must be remembered, however, that the only way they were able to retain the goodwill and services of the indigenous inhabitants was providing them with meat. Moreover, they often saw the game in such abundance that they probably imagined that all the shooting they could do would make little difference in the numbers of the animals. Personally, I never shot anything which was wasted, and I am certain that men like Gordon-Cumming, Baldwin, Selous, Neumann, and many others of the older hunters could have said the same thing ; for African natives when they can get at meat never allow it to go to waste.

Some of them are so ravenous for flesh that they will even drive lions and wild dogs off their kills to get it, which proves that there has never been game killed by white hunters which was allowed to rot in the bush or veld.

Time has changed things by the opening up and settlement of wild countries, and modern weapons and easy communications will, in the course of years, exterminate the natural fauna. When game gets scarce in places where it was formerly abundant, it does not follow that it has all been shot, for after animals have suffered much decimation and molestation the remainder trek away for less disturbed localities. So long as such places can be reached, the game will still survive, but such sanctuaries are constantly getting circumscribed, and, moreover, certain species will not live in environments unsuited to their habits.

The sportsman is nowadays rightfully limited in his licence to a certain number of each species ; and in some cases the numbers allowed are fixed on too generous a scale. When a man has shot one or two good specimens of the horns of a certain animal there is no necessity for him to kill the full number allowed, unless he has got to do so to supply food for his native following.

His chief ambition will be to get good horned males, but amongst some of the African species of the antelope the females bear longer horns than the males ; but this is only the case in a few species such as the Eland of Central Africa and the Gemsbuck of South Africa.

In the Sable and Roan antelopes the males grow much larger and longer horns than the females ; and in that grand creature, the Kudu, the female is hornless. Therefore, there is no excuse for killing the latter under any circumstances.

Sometimes the beginner finds it extremely difficult to tell the males from the females among certain species, and this is particularly so with Roan antelopes and Lichtenstein's Hartebeest. However,

with some experience he will soon be able to differentiate between them.

When males only are killed, the species does not suffer much diminution, as there are generally plenty of young males coming on, but the matter is vastly different in the case of females, for by killing them the potential existence of many others is destroyed for ever. Therefore, I think that the licence numbers regarding any species should only allow males to be killed, especially in species of game which are getting scarce.

The horns of females which grow them, such as the Eland, Sable antelope, Roan antelope, and Lichtenstein's Hartebeest of Central Africa are always thinner than those of the males of the same species, and in a good light there is little difficulty in noticing this. In the failing light of evening it is more difficult to tell, but when there is not sufficient daylight to do so one should not fire, for if this impediment exists it will also be harder to shoot straight and put in a vital shot, which in itself should be sufficient reason for waiting for a better opportunity.

The tyro often suffers from that excitement called "Buck-fever," and this leads to indifferent shooting, and consequent suffering to the game.

In a book I possess entitled, *A Summer Ramble in the Himalayas*, published in 1860, the author has an excellent sentence, which runs as follows: "In imagination it seems quite easy to shoot at animals in the forest with just as much coolness as at a card stuck against the trunk of a tree from your tent-door, yet nevertheless, when it comes to practice, not one in ten of those who turn to the rifle for amusement or excitement can do so in their noviciate; many acquire

but a moderate share of this coolness, and but few become perfect masters of the art."

This is true, and it is not only the novice who suffers in this way, for many old hunters have always a difficulty in shooting straight at game, especially dangerous game.

Personally, I have always felt more excited when spooring game than I did when I got up to it and the time to shoot had come, but I know of others who experienced just the opposite feelings, as the actual presence of the game affected them more than when they were tracking it. I suppose it is all a matter of temperament, due to the nervous system, and the way it affects the mentality of each individual.

The pursuit of many animals which are not classed as dangerous game may prove risky to the hunter, such, for instance, as following certain animals like the Abyssinian ibex, which inhabits most precipitous country, and the same can be said about game in the Himalayas of India, and the Rocky Mountains in America. The danger in such localities is from bad falls which may likely prove fatal; so plenty of men would prefer to hunt a bull elephant in thick African bush to crawling after ibex or bighorn sheep along the tops of precipitous cliffs where a slip might mean a broken neck, or a smashed-up body.

Personally, I think it is much safer amusement to follow any dangerous beast with an accurate small-bore rifle than, for instance, to cross a busy London street thronged with motors, or when driving a car myself to go round a sharp corner on my right side and chance meeting some scorcher on his wrong side of the thoroughfare. I am quite sure a policeman who directs the traffic in some much-

used street in a large city is hourly in greater danger of losing his life than an African or Indian big game hunter, for some beginner when he, or she, has to pull up, is quite likely to put a foot on the gas instead of the brake, than is any lion, tiger, elephant, or buffalo to charge after it has been wounded in the jungle. Then careless pedestrians who step off pavements without looking are in still greater danger than the policeman, judging from the annual death-roll in all the great cities of the world.

Bravery, too, is a strange thing, and the word includes many definitions. If one does not fear then one cannot be brave, for the word is only applicable when it applies to the subjugation of fear. Some hunters are more afraid of snakes than they are of lions, and others dread hornets more than they do buffaloes. A man who might win the V.C. by performing some gallant action in the heat of the moment, when inspired by the spirit of self-sacrifice, might go cold with fear if he were lost in the African bush away from water. Big game hunters with a long experience think very little of the risks, as do all men whose daily work may be dangerous, such as steeple-jacks or express engine-drivers.

Killing game may be cruel, but no more so than slaughtering domestic animals for food, and those who decry shooting are hypocritical if they are meat-eaters. The hunting instinct has come down to us through the ages from our ancestors, who had to hunt to live. The best-balanced statement I ever read on this question was written by the late F. C. Selous in his *Hunting Trips in North America*. On page 349 he writes, with reference to shooting a Caribou bull at 20 yards: "Did I feel sorry for what I had done? it may be asked. Well! no, I did not. Ten thousand years of superficial and un-

satisfying civilisation have not altered the fundamental nature of man, and the successful hunter of to-day becomes a primeval savage, remorseless, triumphant, full of a wild exultant joy, which none but those who have lived in the wilderness and depended on their success as hunters for their daily food can ever know or comprehend."

So long as a man gives game a fair sporting chance he has nothing to regret in killing creatures. The hunter certainly feels a greater exaltation after slaying a dangerous beast than he does after killing a harmless one, and there is no doubt that when he has been put to some trouble to obtain a trophy the work entailed adds an extra value to it. The difficulty is often to "draw the line" between justifiable action and that which is otherwise. For instance, I think fox hunting is a noble sport, for it teaches reliance and horsemanship, is healthy and invigorating, and gives lessons of quick decision as to the best line of country, and so on ; but why, when Reynard has led a hunt for a long run, dig the poor beggar out of a hole he has taken refuge in ? That is not sport ; and neither is following a hunted stag into the sea in a boat, catching it, and cutting its throat ; which is a discreditable incident I read of some time ago ! The great thing is always to give the quarry a fair sporting chance.

The beginner at big game hunting will benefit by remembering the following Rules, which have been proved by many experienced men to be the best. They are :

1. Approach an animal as close as possible when it shows no signs of bolting, as nearness means better shooting.
2. If a beast is hit, do not fire at others until the first one has been recovered.
3. Never fire running shots, unless at an animal already wounded.

4. Put wounded game out of pain quickly, and do not grudge an extra cartridge in doing so.

Now for a more detailed explanation of these rules, as in such short sentences there are several points not included.

With the modern rifle, though it may have a flat trajectory to 250 yards, there is the all-important question of angle. The human eyesight is incapable of discerning true angles much farther than 150 yards, and if the exact position of the animal is unknown then I think it a shame to fire at it. If a beast always stood dead broadside, or full face on, there would be little difficulty in fixing the spot to shoot at, but game is naturally seen standing at all angles. When any animal is killed, the novice should carefully watch the cutting-up, so as to get into his mind the exact position of the vital organs. Only two are of much interest in the case of antelopes—the heart and the lungs—for the head is a small mark, and no one will want to smash the skull, headskin, and horns. Later I intend to write something about the vital shots, as this is a most important point regarding quick killing.

The contents of Rule 2 describes one of the commonest errors the young hunter can commit, and it is a cruel action to wound a beast in a herd, and turn the rifle on others and likely also wound them. After a beast has been wounded most humane men will try their best to find it, which means tracking it up with the help of the natives. With two or three wounded animals about, it is apparent that only one can be followed at a time, so, as they are all likely to take different directions, one has to concentrate on one or the other. Should the one followed carry on for a long way and night approach before the rest can be recovered, they have probably gone for good.

Wounded animals for two reasons usually leave a herd. First, they weaken and cannot keep the pace ; and second, they are likely turned out of the herd by the others which object to the smell of blood. Some wounded beasts doubtless recover, but probably three-quarters of them are killed by the carnivora, such as lions, leopards, hyenas, and wild dogs.

It does not require a large amount of imagination to picture the terror of a severely stricken creature whose powers have failed through a painful and crippling wound, as it lies helpless in the darkness, knowing that it is at the mercy of its enemies, which are merciless.

When a novice is keen and excited he may not picture the end of a careless shot in this way, but that is the final phase of many animals which have escaped and never been recovered in Africa.

In Rule 3 I mention another common fault of taking running shots at unwounded game, and I think it is only permissible to shoot at a moving animal after it has been hit with a standing shot, and then runs away.

South Africans were much addicted to this sort of thing, for on the open veld of South Africa it was often impossible to get within 500 yards of herds of game, such as springbuck. This, however, did not deter many men from emptying a full magazine of high velocity ammunition at such animals. Here is what Sir Alfred Pease says in *The Book of the Lion* on the subject, and he knows all about it, for he lived in South Africa and Kenya Colony for many years, besides having had a large experience of travel in other parts of that continent :

“ He (the Boer or Colonist) will see a galloping buck 400 yards

away, and before you can say 'knife' his first shot strikes a yard behind the buck; you have hardly marked the puff of dust when a second shot strikes two yards in front or a yard over, and as quickly come two more shots in succession, one bullet correcting the preceding shot on the instant, with a nice estimate of the pace the buck is travelling. In the time five shots have been fired, one of which hits, you could not have done more than make a tolerable guess at the range, aligned your sights, judged the pace and got one, or at most two shots off. Presuming you are as good a judge of range and of taking in front, he yet has some five chances to your one of scoring a hit.

"In this way, by pumping lead at game moving at 500 or even 600 yards, an Afrikaner will often get a buck; it is deplorable to have to assert that he will, when firing in this way at bunches of antelope, as often wound several without killing any. Yet I have seen some very bad shots among these people, too."

It was certainly this reckless and short-sighted type of shooting which finished off the game in Southern Africa, and what Sir Alfred Pease writes proves it; for no amount of game in open country where horses can generally be used could be expected to last indefinitely under such conditions.

Certainly, when a wounded buck, or other animal, is struggling away, one should fire at it on the chance of stopping it, but this depends on circumstances. It often pays to let it go off, and wait for a bit before following it, as if not scared it will likely settle down in the first thick cover it finds, particularly when suffering from a bad wound affecting its powers of movement.

With dangerous game such as lions, elephants, buffaloes, and

leopards, it is a mistake to take a running shot at them unwounded, for it is extremely difficult to place a bullet well under such circumstances, so it is best always to try for a standing shot and make sure. I have often written that the first bullet is the all-important one, for much hinges on whether a vital spot has been struck or not. This saves the weary and often dangerous business of the follow-up. Quite three-quarters of the fatal accidents to sportsmen are due to following wounded animals into thick stuff where the advantage often lies with them, for the hunter has to move, and the game is listening and watching, especially after they have been put on the qui vive by hearing some sound showing they are being followed. The hunter, when following, should go very slowly, and the native tracker should be in front doing the tracking, and the hunter with his rifle ready to fire close behind him. The tracker, when he has caught sight of the animal, should immediately get low down, so that a shot can be fired quickly, and after the shot he should get behind. This procedure is better than the hunter trying to do the spooring himself, as one cannot keep one's eyes on the tracks and keep a good look-out at the same time. It must be remembered that the natives are marvellously quick in getting clear of a beast which is coming on. I have seen a herd of buffaloes suddenly start up when five natives and myself were tracking some elephants in thick thorn scrub. In a twinkling the natives were all over the place as the buffaloes rushed past. Two were up trees, and the others seemed to disappear in a safe direction like magic. Personally I lay low under the shelter of a small anthill, which prevented the animals running me down in their stampede for safety. Then I have seen natives clearing when elephants were smashing past, and under such cir-

cumstances they are almost as quick in action as a startled leopard, and there are few beasts which move quicker than these spotted cats.

I have heard of cases of white men who, after wounding game, have sent a native with a rifle next day to find it ; but this is hardly fair unless the European is laid up with fever or some other complaint, and is unable to go out himself. Most natives, unless trained as soldiers, are extremely poor shots, and any success they have with their old muzzle-loading "Brown Bess" type of gun is due to getting so close that it is easier to hit than miss. With a good rifle their idea is that the higher they adjust the sights the better will the rifle kill. Before native hunters go out to hunt they often hold a dance over their old gas-pipes, with weird incantations and the burning of strange concoctions of herbs, so as to propitiate the spirit which they believe can influence the power and accuracy of the weapons. They do not blame the man for not killing game well, but rather the gun for being affected by some malign influence. This, of course, is very amusing to the European, who in the present age, when rifles are so accurate and reliable, knows that if he does not kill game he can blame himself for inexpertness and not the weapons he uses.

Some people prefer to join a party on a shooting trip, but the old hand rather chooses to go by himself, for he has probably discovered that when a member of a party there is sure to be misunderstandings and bickerings after a time. Men who would have little difficulty in agreeing when living a comfortable life in civilisation would not be together for two weeks in the bush without disagreeing about something—usually a trifle. Jealousies may arise should one man be more successful than the others, either through

good luck or by being a better hunter. Then if each member has his own "boys" (all native servants are called "boys" in Africa), there will probably be a rumpus if one man orders about another's boy, or has a complaint to make about him for pilfering or impertinence.

If a party of three or four Europeans are camped together they will have to hunt separately, for it is quite impossible for them to go out together. One man will want to go where some one else has gone, and another may not believe in hunting anything except some certain species, and so on. Then some fellows are greedier than others at feeding-time, and may possibly grab an unfair share of some scarce delicacy. In fact, there is no end to the reasons which may give rise to disagreements, so all hunters would be well advised to keep clear of big parties, especially when the members may not know each other too well.

Much the best way is for each man to have his own tent and camp outfit, and his own retinue of followers, and make a camp at least 20 miles away from others. Then on off-days they can occasionally meet and discuss the sport, and if one has got all he wants in one locality, change over or shift camp to somewhere else, for there is plenty of room in the wilder parts of Central Africa.

There are certain unwritten rules the beginner should know with regard to fairness, and I shall try and give examples of things that I know have happened.

A man one day wounded a fine bull elephant, and being seedy next morning with fever, caused by the excitement and hot work in the sun, he decided not to follow it. His friend went after it, and

after a pretty stiff time he finished it and claimed the tusks. Personally, I think they belonged to him, but if he thought the elephant was too badly hit to get away I think he would have behaved more fairly to have divided them. In this case he had to track it a long way, and had a scrap to end matters.

In the event of a man wounding a dangerous animal, and being frightened to risk following it up and finishing it, any one intending to do so should give him the chance, and if he refused, then say that he expected if he killed it to keep the trophy.

There is rather a foolish sportsman's rule of "First Blood," giving a hunter the claim to the animal which some one else eventually kills. Should a beast be so hard hit that it cannot move then this maxim might hold, but if it is capable of being nasty I believe the individual who kills it has the better right to keep it. Should two men sit up¹ in a *machan* (platform) for a lion in Africa, or a tiger in India, it is best for them to toss up for the first shot. Before doing so they can decide, if they like, to divide the trophy when either kills the animal. The best plan in all doubtful cases is for a man to imagine how he would like to be treated himself in the circumstances, and then treat the other fellow in the same way; for one's sense of fairness is probably the best way to decide the misunderstanding.

Most big game hunters, prospectors, ranchers, and others who live on the fringes of civilisation are usually men of marked in-

¹ I do not consider sitting up for anything except a man-eating lion, tiger, or leopard is a very sporting proceeding. Of course, when such animals have killed valuable domestic stock and cannot be found by day, it certainly seems permissible to do so. Laying down poisoned bait is certainly cruel and unfair, but I have met men who thought it justifiable, though in my opinion such individuals were usually frightened to try and follow up the animals on foot in the daylight.

dividuality and self-reliance ; for life in wild and primitive countries naturally brings out these characteristics. They are apt to "call a spade a spade," and often use language which would be considered impolite in more conventional societies, but nevertheless they are the men who made our Empire, which many of our vacillating and sentimental politicians seem resolved to lose.

But as Kipling says, "this is another story," and as this book is about the denizens of the wilds and not on changing political creeds, I must not pursue the subject further here.

Some people inveigh against what they term "blood sports," notwithstanding the fact that they gorge roast beef, boiled mutton, and their Christmas turkey, and they have no hesitation in calling all shooters butchers of the most rufous complexion. For some reason they imagine that it is the killing alone which forms the chief enjoyment of hunting. Here they are wrong, for most big game men, or anyhow the best of them, like hunting big game because it takes them into the primitive parts of the earth where they can view nature in its untouched charms. Then there is an intense fascination in pitting one's powers against those of the larger and more dangerous fauna. So much is this the case with some men that it is only the pursuit of the game classed as dangerous which interests them. For instance, after a man has had some experience of elephant hunting all other kinds of game-shooting becomes uninteresting, for they lack the exhilaration which forms so large a part of the business of hunting these magnificent pachyderms.

Then apart from the actual killing there is the attraction, and even romance, of getting into country little known, the association with primitive men, and the wonderful nights in the dry season when

the velvet sky is alive with stars, or lightened almost as bright as day by the golden moon.

I think it will be a pity when this "call of the wild" no longer appeals to our young men, for it certainly helps to stimulate that spirit of adventure which has done so much towards the formation of our Empire.

A great help to any youngster is to read the books of men who spent many years hunting in Africa, for in their works one can follow their methods. Having perused practically all the volumes written for the last fifty years on African shooting, I am able to indicate where the best information and advice for the beginner can be found.

Perhaps the best known African hunter of comparatively modern times was the late Captain F. C. Selous, and I know it was his first book, *A Hunter's Wanderings in Africa*, which gave me an intense longing to go there and shoot game. Selous was a most observant and exact field-naturalist, and his *African Nature Notes and Reminiscences* is amongst the best books to be found on the game of that country. There is only one other book which can compare with it in my opinion, and this is *Animal Life in Africa*, by Major J. Stevenson-Hamilton, who was game warden of the Transvaal Reserves for some considerable time. There are very few men who have shot so many lions as he has done and said less about it. As a guide to the habits of the game I know nothing better than his descriptive book.

A very fine volume, and the only one he wrote, is *Elephant Hunting in East Equatorial Africa*, by the late Mr. Arthur H. Neumann. Not many men have shot so many elephants as he did, or knew more about these grand animals.

My old friend, the late Major C. H. Stigand, after we did the

book on Spoor, wrote several fine books, such as *The Game of British East Africa*, for which I sketched a few tracks, and *Hunting the Elephant in Africa*, besides other volumes on travel and sport.

Big Game and Pygmies, by Dr. Cuthbert Christy, is a most interesting work, and as it is written in a scientific way, all its contents are very exact. It mainly describes shooting in the Congo Free State.

As a volume dealing almost solely with lions, nothing can surpass as a work of thrilling interest Sir Alfred Pease's *The Book of the Lion*, for it contains the stories of many exciting experiences with those animals, plus much natural history.

A book I like much is *A Game-Ranger's Note-Book*, by Mr. A. Blayney Percival. His notes on East African game, particularly lions, are very good indeed, for they are written from a very long experience in that country.

Mr. R. C. F. Maugham has written several volumes on African sport and natural history, amongst which I like his *Wild Game in Zambezia* for its interesting notes on the fauna.

The Man-Eaters of Tsavo, by Lieut.-Col. J. H. Patterson, is what in novel description might be called "a thriller," with this difference, that instead of being fiction it is absolutely true.

Such books as those by Captain W. Cornwallis Harris, Roualeyn Gordon-Cumming, William Cotton Oswell, Charles Baldwin, Sir Samuel Baker, and others, though all intensely interesting, are now rather out of date as a guide to the countries where game exists, so I do not give their titles.

There is one modern book which all young hunters should carry, for its use, not only in giving the measurements of the best specimens of horns and skins, but for the exact information it gives

of the localities where all the animals are found, and it is Rowland Ward's *Records of Big Game*. It is rather expensive, as it costs 50s., but is well worth the sum. Second-hand booksellers can sometimes supply a fairly recent edition ; and even one which is a few years old is better than not having such a useful volume as a guide to the specimens procured. However, let the young hunter always remember that a trophy should be most valued for the trouble and incidents experienced in getting it, for I consider a fair specimen with such a history is of greater interest than perhaps a much finer one shot by chance. The prize is often considered by some the only thing to go for, and the winning of it all that matters ; though it may be easy ; whereas it is the actual work done which adds a lasting value to success in anything, and in nothing more than in a hard-won trophy of the chase.

Rifles

THIS is a subject which many may think has been carried to the point of *ad nauseam*, although it is one which is bound to interest all young hunters, who have to be guided by what they are told, or by what they have read, before they can gain practical experience for themselves.

There are two schools of enthusiasts—the small and the large bore—and I seem to hear a whisper—“both bores.”

Personally, I never read a book on big game without hoping that the writer would say something about the weapons he used, and sometimes I have received letters from people who have read my books saying how interested they were in my remarks about weapons. Should the subject bore my reader it is easy to skip this chapter and turn to the next.

The beginner should make a point of always carrying a rifle himself, or he will miss many chances, and he should do so even when tramping along native paths, as in wilder Africa one may come across game at any moment.

Having tried many types of rifles from the old black-powder 4-bore to the tiny .256 Mannlicher, I have had sufficient experience to enable me to decide what is the best all-round weapon. As I will relate later, I am no believer in the second-gun theory, and neither are others with a large experience, and after all, little is of value unless founded on experience. However, a man can naturally

use any rifle he prefers, but he would be wise before deciding to consider these three questions :

1. What is his physical strength ?
2. Is he a fair shot ?
3. Can he keep cool in danger ?

To deal with these clauses : Physical strength at home and the same in tropical Africa are two different things, for during the hunting season the heat is often terrific. Then the going is often very rough, and distances great, and men sometimes get malarial fever, which will reduce a man's strength greatly and make him long for a weapon that does not wear him out on a long day. Some may remark—"But he can get a gunboy to carry a heavy weapon for him." Yes, he can, but I have said a man should carry a weapon himself, and I shall later discuss the failings of gunboys.

Next : Is he a fair shot ? Probably he may be able to do good work at a target which does not run away, or charge at times, when one gets an outer instead of a bull ; but it is one thing lying down when one is fresh and cool to shoot at a mark, and quite another to hit a vital spot inside an animal, often indistinctly seen and hardly still for a moment, when a man is dead beat and dripping with perspiration after a gruelling tramp in a blazing sun through the roughest of country.

The best hunters are seldom good target shots, and the reason of their success is due to keeping cool when they get to close quarters ; and here we have arrived at Clause 3.

Most really good work is done at close quarters, so it is not necessary for a man to be an expert with a rifle to kill game satis-

factorily, though, of course, the better shot he is the less mistakes he will make.

It does not necessarily follow that the placid individual is cooler in danger than the more excitable fellow.

The type of shooting which taxes a man's nerve most is elephant hunting, though the pursuit of lion and buffalo is almost as bad. The elephant is so colossal, and so tremendously powerful, that he imbues the hunter with a greater respect for him than does any other animal in Africa; although it is possibly every bit as dangerous to follow up a wounded lion or buffalo in thick cover as it is an elephant.

I do not intend to give in this chapter a detailed list of bores with their bullet weights, striking energies, velocities, and so on; as these can be found in gunmakers' lists, and in books on the subject. Nevertheless, in mentioning any particular rifle I may sometimes give these details. There are so many rifles of different bores, actions, and weights, that it is difficult to remember them all. Some people prefer double-barrelled, others single magazines, and others falling blocks; so unless a man has tried all types in the field his opinion would be of little value. On a rough estimate I have owned and used quite forty rifles of all kinds, and I unhesitatingly say that for African sport the magazine action is the best. There are several good magazine actions—the Mannlicher, the Mannlicher-Schönauer, the Mauser, and Lee-Enfield. The Mannlicher and Mannlicher-Schönauer are the smoothest working actions, and the Mauser probably the strongest.

A magazine rifle costs less than a good double, which when made as a best quality hammerless ejector may be priced at well over

£100 at the present day, although about £65 would have bought it pre-war.

Doubles can be made in any bore from .256 up to .600—the latter a ponderous weapon weighing about 17 lb.

The strongest rifle any one would think of taking is a double .470 or a .500, weighing 11 to 12 lb., but few white men could carry such a weight, and then shoot well with it when he got up to his game. Therefore, it is usually carried by a gunbearer.

There was some correspondence in *The Field* during 1919 about rifles for big game, and when these were interesting I collected them and pasted them in a cuttings book. Here are a few quotations from a letter containing most excellent advice by Sir Alfred Sharpe, published on 21st June 1919. Leaving out the parts about black powder rifles which he used in the old days, and which are now out of date, he then deals with cordite rifles, and writes :

“After smaller bore magazine rifles with cordite and nickel-covered solid bullets came in, I have used, as a rule, for elephants, nothing but magazine rifles. For five years I used a .350 Rigby.”

Then he mentions using a .333 and .404, both by Jeffery, which he much preferred to a double .600 he tried.

Regarding the carrying of a second rifle by a gunbearer, he says : “I should also like to point out the fallacy of the ‘second gun’ theory. After thirty years of African shooting (mostly elephants) I can say that I have never had a gunboy on whom I could absolutely rely to hand me a second rifle in a very tight place, when a second or two of time may make all the difference in the date of one’s decease.”

As Sir Alfred Sharpe has had a most extensive experience of elephant shooting, advice from him is much more valuable to the

beginner than any amount of theoretical matter written by some one who is well up in ballistics, and who has never shot in Africa.

The rifles he mentions—.350 Rigby and .404 Jeffery—I have tried, and they are both good. The former weighs about $7\frac{3}{4}$ lb., and the latter $8\frac{1}{2}$ lb.

Many elephants have been killed with .256, .275, .303 and 7.9 mm. (.311) rifles. I have shot elephants with them all; and the .256, .275, and 7.9 mm. are excellent killing weapons when used with the ordinary solid bullets weighing 156, 173, and 225 grains respectively.

The covering of these .256, .275, and 7.9 mm. bullets is harder and less liable to break than is the .303 solid. Therefore they are better for headshots at heavy game.

Another good rifle is the .318 “Axite”; but when I brought one out with me to Africa I got a bad lot of cartridges with it loaded with defective caps. Every second cartridge missed fire. Some of these would go off with a second try, but this was too risky under certain circumstances.

Should a second rifle be carried by a gunboy he has a habit of lagging behind when most wanted, and I have heard of a case when he threw the rifle in the mud and chocked up the muzzles, and then climbed a tree, so it is far better, I think, to have a good magazine rifle and carry it oneself, and also plenty of cartridges.

With most magazines one has five shots, so after firing two shots one has still three left in reserve.

After the two in a double are expended, it takes some time at the most critical moments to get it loaded up again. The rifle having hinged barrels, a bit of leaf, twig, or grass may get on the face of the action, and prevent the barrels closing if it is fitted with a snap lever.

I think the pull to the side bottom lever is the more reliable, as it is very strong. The strikers of double and falling block rifles sometimes break, but I never heard of the striker pin of a magazine rifle going wrong, though I have heard once of the mainspring weakening and causing misfires. A spare spring can always be taken.

A favourable point about doubles is certainly the fact that a very quick right and left can be fired, without, as in the magazine, having to lower the rifle to work the bolt ; but when one considers points such as extra¹ weight, and slowness after the second shot has been fired, there is no comparison between the types for reliability.

Single rifles are usually more accurate than doubles, unless the latter are made very carefully, for the gunmaker has great difficulty in setting the barrels of a double both to shoot the same. That is one reason why a best quality double rifle should be bought, because more care and work have been expended on regulating the shooting of it than on the cheaper grade weapons.

There is a type of rifle termed a "Magnum" which gives velocities up to 3000 ft. sec. They shoot light pointed bullets, and such a velocity would be impossible unless this were so. In the small and medium bores we have the "magnum" .256, .275, .280, .300, .318, .350, .375, and some others.

Taking the .318 shooting a 180 grains bullet at about 2800 ft. sec., I do not consider this bullet so good for African game as the 250 grains one which only gives a muzzle velocity of 2300 ft. sec. or thereabouts.

¹ Some people like a heavy rifle because it can be held steadier, especially when it is windy ; but as one often carries a weapon for quite thirty miles for every shot fired at game, a light rifle, in my opinion, is best.

For shooting small and medium game it really does not make much difference what rifle is used, because all of them are efficient. In fact, some of these "Magnums" are too powerful for the small animals when used with expanding bullets, but become inferior to the type of old .256 and .275 with blunt solid bullets, when used on the skulls of elephants or hippos.

There is no doubt that the rifle with the greatest striking energy gives a harder blow than the smaller weapon, but large game is not easily "shocked" with any rifle unless it is vitally hit. For head shots the main point is efficient penetration, and an elephant cannot be killed deader with a .577 than with a .256, if both bullets strike the brain. Certainly with heart and lung shots the bigger bullet may kill a little quicker.

There is a fallacy that a man has only to use a large bore to get everything he hits, but this is wrong, for an animal struck in the wrong place with, say, a .470 bullet, can escape. Then, having sustained a larger wound, it is more liable to die than if it had received a smaller bullet in the same place.

The falling block is often a nicely balanced and handy rifle, and I will say this, that both doubles and falling blocks usually balance slightly better than magazines.

Once I possessed a single falling block .303 by Fraser of Edinburgh (now out of business). It handled well, was most accurate, and had beautifully cut sights—but it had a bad fault. The side lever action was not strong enough to force the breech-block open after the chamber had got slightly corroded, so when it jammed I had often to put the toe of the stock on the ground and use the sole of my right boot to force the lever down.

When a young man has got hold of a rifle which suits him it is a mistake to change too much, for good work can often be done with quite a cheap weapon after one has got accustomed to its shooting. For instance, once when starting out for the Loangwa Valley after elephant, the small bore I had went wrong, so I had to look round for another. I owned a double 10-bore Purdey rifle that weighed about 12 lb., which is too bulky as an all-round weapon. Besides, I am a greater believer in the rapier than the bludgeon type of bullet.

A friend named A. A. Langshaw, in Fort Jameson, offered to sell me a single sporting Martini .303, with a 24-inch barrel, but he admitted it was old, with the usual corrosion in the breech-chamber, which .303's are so addicted to. The fired case often jammed so badly that a rod had to be carried to ram it out, which is a slow business, and a bit risky when after elephants. He asked the modest sum of £4 for it, and I believe it cost about £6, 10s. when new. The first thing I did was to fit a small ivory bead on it, as it had one about the size of a small pea. The front sight should be about $\frac{1}{16}$ th of an inch in diameter. In my *Memories of an African Hunter* (T. Fisher Unwin, 1923) there is a misprint regarding this, for the $\frac{1}{16}$ th was wrongly printed as $\frac{1}{10}$ th inch, which is too big. With this single Martini .303 I shot a number of elephants, two rhinos, several hippos, and many antelopes, such as eland, kudu, roan, hartebeest, &c., in the course of a few months' trip.

Several times with elephants it nearly got me into trouble with a badly jammed case, but I got to know the rifle well, so could kill with it.

It had Metford rifling, which does not wear quite so well as

Enfield, and the bore got rather enlarged, so that a bullet could almost enter completely at the muzzle.

Then I took it with me to Tete, on the Zambezi, and supplied my carriers with all the meat they and myself required on the journey. I shot one of the best kudu bulls I ever killed on this trip.

On reaching Tete I found that there was only one houseboat available to take me to Chinde on the coast, and the half-caste Portuguese who owned it, knowing I was in a hole, tried to fleece me by asking an exorbitant figure for his boat and crew of men to row and pole the vessel.

But the Martini again came to my aid, for the Portuguese spotted it, and asked me if I would sell it. I said I would at a price, so he asked me what I wanted. Now was my chance to square the overcharge for his boat, so I said £10, and I told him what a lot of game I had killed with it; and here did not need to exaggerate at all. After bargaining for half an hour he got it for £8 on condition I handed it over to a firm in Chinde, to be returned to him as soon as possible after my arrival there.

On the way down the Zambezi I shot several hippos with it, one being killed in the Lupata Gorge, which supplied my men and myself with our Christmas dinner. My other provisions were scanty, as besides the meat I had only a little rice, a few Huntley & Palmer's biscuits, and tea. The hippo meat was rather different to tender turkey, and my other viands lacked variety, but there was a glorious moon which made the river and sandbank I was tied up to shine like gold. The trees on the top of the gorge stood out against the sky like the things we see in Japanese pictures, and as I went to sleep

I listened to the hoarse grunts of the remainder of the hippo herd a little down-stream, while inland I heard a lion and some hyenas calling their hunger to the stars.

The last service the little Martini did me was in stopping a bull hippo which dashed at the boat with its mouth open, just below Sena. It got a solid bullet right down its throat, and went under immediately. There were some natives on the bank near, and my boatmen shouted to them to wait for the hippo, as we could not delay for the purpose, as they sometimes take quite three hours to rise to the surface after being killed. I have no doubt they got it, for I knew from the sudden way it collapsed that it was dead. I think the bullet broke the neck just behind the skull, as it was too low for the brain cavity.

This long yarn about a cheap rifle may interest the beginner, for it will show him that he can often pick up for very little a weapon which will do excellent work. A young man leaving for Central Africa should get a well-made small bore, but I advise him to wait to purchase a larger bore until he gets out, as it is often possible to pick up an excellent rifle from some party who has finished his trip and wishes to dispose of his rifles.

If some kind-hearted aunt or uncle, however, suggests presenting him with a double .470 hammerless ejector as a sort of life insurance policy, by all means let him take it; for it will be easy to sell if he dislikes it after a good trial in Africa.

The older generations of sportsmen who shot with very heavy old black-powder weapons are rather amusing on the subject, and the following advice of an ex-Indian army colonel to his nephew, who has got a Government billet in Africa, is interesting: "Got

a billet in Nyasaland, Johnnie. Well, if you're going to shoot elephant get a double 8-bore—shoots 12 drams and 2 ounces; killed the Jiajuri 'Rogue' with mine; he fell a 'deader,' and never winked an eyelash!" The uncle, never having tried a modern small-bore, does not know that a .256 bullet in the brain of the Jiajuri "Rogue" would have sent him to sleep just as effectually as the 8-bore did, and with less discomfort to uncle, who lost some "claret" from his nose on that auspicious occasion!

There is a class of rifles I have not yet mentioned, and it is the large-bore magazine type, such as the .416 Rigby, .425 Westley Richards, .500 Jeffery, and .505 Gibbs. Their respective bullet weights and striking energies are: the .416—410 grains, 5130 ft. lb.; .425—410 grains, 4820 ft. lb.; .500—535 grains, 7200 ft. lb.; .505—550 grains, 6180 ft. lb.

Approximately they weigh: the .416 = 10 lb.; .425 = $9\frac{1}{4}$ lb.; and .500 and .505 = $10\frac{1}{2}$ lb.

All are too heavy to carry on long days in the tropics, but for those who want a very powerful second rifle to be carried by a gun-boy any one of them in my opinion is much better than a double rifle of equivalent or greater calibre.

There is nothing more fatiguing than for a man to carry a rifle which is too heavy for him, as it simply drags him to bits on a long tramp, and, moreover, puts him off his shooting. Of course, if a man is a regular Sandow let him do so, for there is no doubt the large bore hits harder and reduces the risk. My old friend, the late Major C. H. Stigand, was exceptionally powerful, but he told me that he preferred his .256 Mannlicher because it did not bother him on long treks. We used in Nyasaland and North-Eastern Rhodesia

to walk about 30 miles a day, and keep this up during trips after game and when hunting.

I cannot believe that there is much more scope for improvements in rifles, for they have already reached a pitch of excellence which seems final.

About their only fault is the short life of the barrels, for the powder gases and the nickelling deposit soon wear them out. I believe bullets can now be got with coverings which prevent this damage from the nickelling.

The best length of barrel for a magazine rifle is about 24 inches, as the bolt action takes up some room. If a 26-inch barrel is fitted, this makes the rifle unhandy in heavy bush and grass. In a double or falling block the longer barrels are preferable, as they improve the accuracy ; but never have them longer than 26 inches.

Single rifles are best fitted with socket sight blocks, as I have known a .303 sporting rifle get so hot when fired in rapid succession that the backsight block fell off. This happened at target work. Personally I would never use a good sporting rifle for target practice, as I would grudge the wear to the rifling.

Both back and front sights should be screwed down to the blocks to prevent a blow shifting them, and a front sight protector should be kept on except when actually hunting. One it is possible to shoot through is best.

Eyes for a rifle sling are useful, and when shaky a twist of the sling round the left forearm helps to steady one.

A funnel should be kept in camp to wash through the barrel with boiling water, and I always carried in a pocket of my cartridge bag a pull-through and some rags (one piece oily), a small screw-driver,

a piece of emery for sharpening knives, and a notebook and pencil.

The young hunter may wish to know what small-bore I prefer as an all-round weapon, and what I would recommend.

Personally, I always liked a rifle weighing $7\frac{1}{4}$ lb., because I have a weak right shoulder due to a bad dislocation when playing polo in Cachar (India) in 1894. This shoulder could not stand on a long day more than the weight mentioned without causing me discomfort, and when I gradually found that it did not seem to matter what bore I used if the bullet was properly aligned, I preferred a rifle of the above weight.

There were five rifles all about this weight which did me very good service, and they were a .256 old pattern Mannlicher by Gibbs, two .275 Mausers by Rigby and Westley Richards, a 7.9 mm. (.311 bore) Mauser by Rigby, and a .303 falling block by Fraser. Should I be going to hunt in Africa still having the .256, I would just as soon use it as any other rifle, though, according to my experience, the 7.9 was perhaps the best killing rifle of the five mentioned.

Rigby's old pattern .350 and his Magnum .350 I tried, and they are both excellent, and doubtless so is Holland's .375 Magnum. However, I found the two former rather heavy for my weak shoulder. The .256 old pattern Mannlicher has the fastest loading magazine I know, and is regulated for clips. When the clip is empty it falls out of a hole below the magazine and can be recovered. After firing, say, two shots, so as to save the three remaining in the magazine, I used to hold back the rising cartridge and slip one into the chamber, holding the top cartridge in the magazine down to allow the bolt to slip over it.

With a Mauser .275 or a 7.9 one can, after a shot or two, push the requisite number of rounds into the magazine to fill it to full capacity, and with dangerous game this is a wise thing to do when there is time.

There is an important feature about these .275 and 7.9 mm. Mauser rifles which I have only seen once mentioned, and this was done by Mr. W. D. M. Bell in his *Wanderings of an Elephant Hunter*. He refers to the soundness of the foreign-made "DM" ammunition for his .275, and how he never had a missfire with it; and also how well the bullet is proportioned with regard to its penetrative qualities in the skulls of elephants. This is a feature I noticed besides the good quality of the caps and cases. Mr. Bell killed many elephants with .275 and .256 rifles, and being a very fine shot believes in small bores in preference to large; and I quite agree with him on this question.

With regard to the old pattern Mannlicher (not Mannlicher-Schönauer) .256 a remarkable number of our best-known big game men have used and liked this rifle, and I can mention Stigand, Selous, Littledale Pease, Loder, Millais, Hodson, Buxton, and Vanderbyl, as using them all over the world. Charles Sheldon, who hunted with Selous in Alaska, shot a number of grizzly bears with a .256, and had little difficulty in killing these tough animals with this weapon.

The Mannlicher, Mannlicher-Schönauer, and Mauser bolt actions are beautifully made, and are most ingenious mechanically, and I do not think any British bolt action can compare with any of them. I suppose that some may assert that this is unpatriotic, but all the same it is true, and it is difficult to get away from facts.

With regard to sighting and stocking, British work is by far superior, so foreign actions should have British sights and stocks.

As to sighting, I have already mentioned that the front sight should be small. It should be faced with white enamel, platinum, or ivory. Ivory gets very brittle and discoloured in the tropics, and oil should be kept from it. A sharp knock will remove the ivory facing, so it has to be treated carefully. The backsight should have a broad cut **V** extending almost the whole width of the sight, and there should be a silver or platinum line, or a pyramid down the centre. It is better that such a device should not quite reach the lowest part of the **V**, because it may cause a slight blur when aligning the rifle. Some like a Lyman, or other form of aperture sight, but I never cared for them. Should one be fitted it should be fairly large in size.

Telescopic sights are doubtless useful for those with weak or failing eyesight, but they have to be carefully fitted, and gently treated, as a blow may cause damage and thereafter inaccuracy. They are, too, very expensive.

As the early mornings are often bitterly cold in Central Africa I like the heel of my rifle finished without the addition of an iron heelplate which prevents the hand getting cold. In great heat, also, the plain wood (checkered, of course) does not burn one's hand like metal. I have on several occasions had to remove my boots to cool my feet on rocky or very sandy ground; and the carriers have had to put cloth, leaves, or grass, between the tin boxes and their shoulders or heads to prevent being burnt. It can be imagined that the heat must be pretty severe before the natives feel it as badly as this. Often to save their feet they used to ask me to give them some thick hide from which to make sandals, and the best for this purpose was the skin of a bull kudu, as it is not only thick but very tough and lasting.

An important point is the pull-off of the triggers of a weapon. One will always shoot best with a fairly easy pull. I never liked the drag-pull sometimes fitted to magazine rifles, and advise beginners to have the ordinary pull-off nicely regulated for good shooting. The trigger should never be jerked off, but released with a steady increasing squeeze of the finger. A hair-trigger is also unsatisfactory, and is, moreover, a dangerous device to have fitted to a rifle, because through careless handling an accident may easily occur.

A cover should be taken for each rifle to save them in wet weather. Instead of fastening with a buckle, a metal button is better. I lost the best roan antelope bull I ever saw through the extra few seconds it took to get the rifle out of its cover by unfastening the buckle. Had it been fixed with a brass knob, or button, the moments saved would have given me time for a standing shot instead of having to take the roan running, when I missed the animal as it bolted in a rainstorm. Although this happened twenty-two years ago, I still think of these grand horns, so this shows the beginner how necessary it is to think of the smallest detail, for it may often make all the difference between success and failure.

Tracking Game

THE most fascinating feature of hunting game is tracking, but it takes a long time to become proficient in this art, for an art it is, to follow for hours through all their devious windings the spoor of animals until one succeeds in coming up to them.

To those who are able to perceive such signs, the African bush is like a book lying open to be read, though it is impossible to understand the writing until one has learnt how to read it.

The smallest scratch on the surface of the ground, a few blades of nibbled grass, or a chewed and dropped leaf, will often tell the hunter that the game has passed that way, so the power to observe such things can only come from a keen study of this subject.

Some natives are excellent trackers, while others are absolutely useless. Naturally, the people who live in villages in the midst of the game, are usually better than those whose homes are on the outskirts of townships, or in country where game is very scarce.

Seeing spoor, or animals partly hidden in bush, is not altogether the result of exceptional vision, but rather in knowing what to look for, so that to become proficient plenty of practice is essential.

Although the white man may become quite adept in the course of a few years, I doubt whether he will ever be able to equal the best native trackers, for they often seemed to me to act more from instinct than reasoning. Most of them have fine eyesight, and though

not observant in subjects which do not interest them, their constant avidity to get meat has, through the ages, sharpened their senses, until some of them have the hunting instinct very highly developed indeed.

I have seen a nipper of about ten years old who was a marvellous tracker. His eyes were as sharp as needles in picking up the slightest indication of spoor, and with the exception of two other men, both middle-aged, I have never seen his equal in the art of spooring. Such a youngster could not possibly have had time to learn much in his short life, so his proficiency must have been instinctive in a large degree.

Before a white man can find out things he must learn the language of the natives who help him, for such words as track, wound, bullet, male, female, tree, grass, to walk, to run, and so on. Then words have to be placed in sentences, and it is often no easy matter to understand the various dialects spoken.

When he is capable of saying "What spoor is this?" he will have just made a beginning in a subject that he can spend years studying, and then still have something else to learn.

As the large bulls will be the first object of his search, he should get to know what their tracks are like. The young of a large species can leave footprints not unlike aged animals of a smaller-bodied species, and this may often be puzzling until one knows that if immature animals have been present, the dams will also have been there, as the young do not travel about by themselves.

Besides the footprints each species of game has different sized and shaped droppings, and these also vary in colour. It is practically impossible to depict spoor on paper as it looks in reality, as there

is often only a very slight impression dependent on the hardness of the ground.

Some animals, such as buffalo and eland, leave a very distinct mark in fairly hard soil, mainly because they are heavy, while others seem to tread more lightly and use the fore part of the hoof more when walking. When game runs, the two sections of the hoof spread out, and, of course, in such a case the marks are deeper, and earth is thrown back if soft. The sable antelope has a very splayed-out spoor when going hard, and he throws out more earth in his vigorous movements than do most of the other large antelopes.

In the dry and hot season spoor often gets filled up with sand and dust when there is a wind, and this often makes it difficult to judge its age. For instance, tracks which are older, but which have been sheltered, may look fresher than more recent ones which have been partially covered over.

The easiest tracks to follow are those made through patches of tallish grass which have not been used before at this exact place. There the line shows far ahead and one can run along the spoor if wished, and still keep on the right line. During the hunting season, although the heat of the day is often terrific, the nights are very cold, and a thick dew forms on grass and trees. One gets soaked through at once early in the morning, but in an hour or two, when the sun gets hot, one soon dries. This dew is very useful if an animal passes along an old track through thick grass, as his passage knocks the globules of water off, which shows clearly to any one following behind.

In heavily timbered country the leaves often lie thick, and impressions made on them do not show at all, so it is necessary to scrape

them aside and examine the earth underneath. This is the slowest type of country I know to spoor game through, and when following elephant through such places it sometimes takes a long time to puzzle out the tracks. In fact, so much time is sometimes wasted that it is hopeless to try to overtake such an animal as a trekking elephant, which may be miles ahead and is still going hard.

Besides the ground spoor there are the signs which animals leave when grazing and browsing, but they are usually more difficult to see than earth spoor, except in the case of elephants which tear off branches, dig up roots, and drop chewed leaves and fruit.

The rhino almost solely lives by browsing on thorn branches, and although it is easy to see where he has been feeding, a few twigs bitten off in passing a bush are not so apparent as his tracks.

When game passes over rocky or extremely hard soil, all the visible marks left may be a scrape or a tiny stone moved, but in such places there may be hollows in which sand has collected, and if they tread there the message is left behind. It is easier to find spoor than tell its age when found, and the best plan when one is doubtful is to follow until one finds the droppings. If these are quite fresh they will still be sticky, and in the case of large animals, such as elephants, they will be warm. Elephant dung if left in the sun soon dries and gets straw coloured, but when dropped early in the morning will still be dark and moist inside by the afternoon. If left in the shade it will remain damp inside for a much longer period. These things have all to be taken into account when one is trying to calculate the age of such remnants and how far ahead the game may be.

When following up spoor it is usual for the native tracker to walk in front and look for it, when the hunter follows just behind,

so as to keep near and look around. If one has two trackers, the other should also keep close, but men following with food and water should be told to keep at least 200 yards behind and not come closer unless told to do so. On no account should they talk, as nothing frightens animals more than the human voice.

Spooking in the glare of a tropical sun is very tiring work for the eyes, which makes it an advantage to have two men out with one for the job. When one gets slack he should be given a rest, and the other ordered to take up the tracks. Besides, when a man is behind he is useful for putting the tracker right at times, as the leader cannot be expected to be infallible, particularly when he has been at it for some time and his eyes get strained.

I used to take a great interest in this work, and though I was nothing like as good at it as the best of native trackers, I was certainly better than some of them. Once when shooting near the Loangwa River I decided to try and get up to an elephant myself, so one day on finding a good spoor I told the tracker to stay behind with the other men, so that he would not attempt to put me right. Fortunately the tracks were mostly over sandy soil, and the elephant was alone, which is a great help. When a particular animal is one of a herd his spoor is much more difficult to follow, as it naturally gets over-trodden and obliterated by the others. It took me about three hours to get up to the elephant, and by that time my eyes were so painful with the strain of searching out the tracks that I realised how tiring this work was when it is often continued for a whole day. Probably an expert native would have got up to this elephant in half the time I had taken; while others, who have pretended to me that they could spoor, could not have got up to it at all. One

man who took on the job of tracker with Captain Stigand actually began to follow a track backwards and was soon proved to be an absolute duffer.

Often the hoofs of antelopes are broken, and zebras, which inhabit rocky country, chip the edges of their feet. These missing portions are apparent in the spoor when they are made on impressionable ground. After one has gained a knowledge of any particular locality it is possible to recognise individual animals from some such blemish.

A knowledge of the configuration of a country helps to indicate how game will travel at times. In Central Angoniland (Nyasaland) I knew an excellent elephant tracker named Kamwendo who knew the ways of elephants so well, and the country they inhabited in his district, that he could often leave the spoor when at fault and pick it up by going to certain places. This, however, is easier with elephants, which, unless they are feeding, keep to well-used paths, than it is with other game, such as buffaloes and antelopes, though I have noticed sable antelope bulls very often come and go to their feeding-grounds by some particular route.

Prevailing winds have a good deal to do with the movements of game, as most animals when they are travelling prefer to keep the wind in their faces so that they can scent danger from their front, but this point I shall discuss further in my next chapter, on Hunting Game.

When one is spooring an animal up one usually finds it will walk up-wind, but sometimes the wind changes and may come from behind, and then the game may also change its course.

An index as to the age of spoor may sometimes be obtained by

noticing that spiders have spun their webs across it when it is deep. It is usually pretty old when this is seen.

Possibly the easiest time to track is after the break of the rains, about the middle of November in Nyasaland and Northern Rhodesia, as the ground is softened with the wet. Another advantage is that most of the old tracks are washed out, which prevents complication.

The worst places to spoor in are large reed beds, often bordering rivers, which are the favourite haunts of elephants. Some of these rough reeds are so strong that it is quite impossible to break them, so one has to stoop underneath if they are high enough, or step over them. In such places I used to get a native to lift them up, or press them down, with his spear or knobkerry.

A vile vegetation to follow tracks into is spear grass, with points as sharp as needles, very dangerous to the eyes, and extremely prickly on bare legs. Fortunately, animals such as elephants and buffaloes which go through this type of country usually progress in one direction, so that the stems lean one way.

Another bad sort of country is thorns, which catch in one's flesh and clothes, but I shall write more about this kind of cover later.

When the tracks of elephants are spread out, this shows the animals have been feeding, as in travelling for long distances they usually go in single file. Nearly all the other species travel on a fairly broad front.

Elephants come to water soon after dark, and during spells of exceptionally hot weather may drink in the daytime. I have seen them doing this, and it was a very interesting sight. After drinking, they make for favourite country to feed, and continue this until dawn, or shortly after, when they begin to trek for their standing and

sleeping places. About 4 p.m. they begin to move again, likely in the direction of water. In countries where they have to travel a long distance to water they may not arrive there until late in the night, and their habits vary considerably according to the prevalence of water, and whether they are liable to much molestation or not.

This will show that tracking them is often a hard and toilsome business, particularly as they lead one into very waterless dried-up country in the hot season. In the rainy season they travel much shorter distances, as they can find water everywhere and plenty of green food.

When it is apparent that the game is far ahead and the trackers are showing signs of being fatigued, it is a good thing to rest in the shade for a quarter of an hour or so, and give them a cup of water. It is wonderful how a short rest at times invigorates them.

Certain natives have much more perseverance than others, and it is not always the quick and brilliant man who is the best; for "dogged does it" is a good precept for a tracker. The great spur to a native is the meat he expects to get, as the trophy has not much interest for him. As an incentive it is, however, a good thing to promise them a present if they are successful in bringing one within range, and such a solatium would, of course, depend on the value of the game hunted.

On bad ground it is fascinating to watch how a good tracker works out the trail. When he loses it an expert will not waste much time at a certain spot, but will walk ahead and quarter the ground, and ten to one will soon pick it up again. In such cases he naturally makes for the soft and sandy places where the spoor is more likely to be easily seen.

Now we come to the most exciting phase of tracking, which is following the blood spoor of a wounded dangerous animal, such as an elephant, buffalo, lion, leopard, or rhino. The antelopes are not dangerous to follow wounded, except, perhaps, the roan and sable, which on occasions might charge if approached to within a few yards. Blood spoor varies in colour, and one can tell from this almost exactly where an animal has been hit. Later, I shall mention vital shots for game, but here my subject is non-vital wounds when the game is able to escape for some distance, and probably get away for good unless one is able to get within shot again by spoor-ing it.

A shot in one lung, though it may eventually prove fatal, may not necessarily prevent a beast going for some miles ; so, for humane reasons alone, it should be followed up. It is best to wait about a quarter or half an hour, as it gives the animal time to settle down and stiffen. This, to a novice, may appear cruel, as it causes a delay in finishing the creature, but it is really kinder, because it adds to the chances of getting up to it. If followed up immediately, it is kept on the move, and may get farther and farther away, and the blood may stop flowing as a guide.

Lung blood is always light-coloured, and bubbles will be found in it. A bullet through both lungs generally kills a beast within a few hundred yards, but I have known an antelope only touched in one lung to carry on for many miles. If the wounded game goes through thick grass or bush some blood is sure to drop on the vegetation, and so long as it does so one does not need to bother about looking on the ground.

Should the bullet have hit a kidney the blood is very dark-

coloured, but usually such a wound has such a sickening effect that an animal soon stops.

Body wounds show ordinary-coloured blood, and so do limb wounds. If a leg is broken one will notice the scrapes made by the swinging limb. An animal may go for some distance with a front leg smashed, but if the hind one is broken it is practically anchored.

This is an unpleasant subject to write about, but unfortunately it is one which must interest the game hunter, because it is impossible for any man to kill everything he fires at. When I read a book in which the author states that every beast is killed "stone-dead," I know he is pulling the long-bow, and likely wounds and loses more game than the man who is not afraid to relate his bad as well as his good shots.

Although I have always favoured small bores I must admit their worst fault is that their bullets often leave little blood-spoor to follow. However, as a wounded beast usually leaves the herd, there are the footprints and occasional droppings to follow should the blood stop.

When it stays with the herd for some time, tracking it becomes exceedingly difficult, as it is often very hard to find the spot it diverged and took a way of its own.

In such a case great attention should be paid to any slight difference found in the spoor of the wounded beast and other members of the herd. The least nick from the edge of a hoof will show up on good ground, and often the angle of the split hoofs may differ in certain individuals. If the shoulder has been broken on one side, then the leg will swing and cause the hoof to leave a dragging spoor behind, or the impress may be less.

The movements of birds often denote the direction of an animal, and all such signs will be noted by the expert hunter, to whom the least detail is worthy of notice.

I have seen cases, too, of elephants and other wounded game being so much affected by a painful injury that it caused them to leave fluid or soft excreta behind instead of the solid type of this matter which is usual when they are fit.

When after a lion or leopard, the movement of vultures and marabout storks are often an index to the presence of these animals. When the former birds are circling over a kill, should they alight in a tree instead of on the ground, the feline may be feeding, though this is unlikely unless it is fairly early in the morning. If the day is cool and dull, both lions and leopards often delay in making for their daily resting-places in the shade. It is intense heat which the African cat tribe dislike, and the same applies to the tiger and leopard in India, and doubtless to the cats of other countries.

When a white man is living a lonely life in the bush, be he an official, farmer, or planter, the study of tracking is a most interesting hobby for him to take up. Of course, when a country gets settled, the larger game makes for quieter regions; but if there is forest land about it is wonderful how difficult it is to drive away the fauna quickly. When there is domesticated stock kept, the lions and leopards will pay occasional visits, as, like humans, they seem to like a change of diet at times. Pigs are favoured food, and I have heard of several cases where a lion has broken in and killed a number of these succulent animals, often slaying in his blood-lust many more than he could eat in a night. Probably in such cases the beasts are so frightened that they rush about and practically fall into his jaws,

which excites the forager to commit more mischief than he would have done had they kept quiet and motionless.

Lions and leopards are by far the most difficult animals to spoor, for they tread lightly compared to heavy animals like elephants, buffaloes, and most of the larger antelopes. Elephants have very springy feet, as the interior is a mass of soft muscle and ligaments, and when they get on hard ground it is not easy at times to follow them. The Ungulata, however, with their split and sharp hoofs, cut into the surface of the ground more deeply; and they do this more when they run, though the hunter should endeavour, of course, to get within range without causing them to bolt away. When an animal or herd runs it often pays to sit down and have a smoke, and if about midday to eat the food and drink the tea made from the water carried. This gives the startled animals time to settle down, when another attempt—but with extra care taken—may prove more successful.

Should one be following a certain species and find other game not wanted in the way, it is best to try and get round it. Zebras are particularly annoying creatures to meet when spooring an elephant or anything else, for they have a way of stampeding in a rush, making a great clatter, and raising clouds of dust in dry weather. Guinea-fowl amongst the birds also frighten game by rising and clacking as they go, so they, too, should be given a wide berth.

A beast shot by tracking is usually valued as a trophy more than one killed by chance, even though the head is less, because it is the work entailed which counts most in the hunter's estimation. At least this is how I look at the matter.

The most important point about spooring game is to go slowly,

for if one rushes along many most important details will probably be missed. No really expert hunter ever hurries over the job, for it is quite impossible to do so and get the best results. This the beginner should always remember if he wants to be a good tracker.

But perhaps the worst fault when following game is to talk loudly, so one should only speak in whispers, and insist that the natives, who have the most raucous voices, should remain absolutely silent. If a man refuses to carry out such instructions after one warning, it is a good thing to leave him out when meat is being distributed, and explain why, and it is unlikely after such a lesson he will err in the same way again, for I am sure he would rather knock out the nail of a big toe on a stump than lose his share of succulent game flesh.

Hunting Game

THE difference between tracking and hunting game is only one of degree, and I have explained in the last chapter that to spoor up an animal for a long way and then get it is a much finer performance than coming on it suddenly and dropping it.

Spooring certain game is more usually practised by the old hand who wants to get some particular species than by the novice, who generally walks about the bush with his rifle, accompanied by one or more natives, who carry the cartridge bag, glasses, water-bottle, some food, and an axe. I did quite a lot of this kind of thing except when I wanted some particular beast, and it is less tiring work than tediously working out spoor in the hot sun, but by comparison is second class. However, it is what will suit the beginner, because he will learn a lot about the habits of the game, and hear from his natives the names of the animals, and many other things which will be of great interest to him. If he has the luck, he may come across anything from an elephant to a duiker, and any day a lion or leopard may suddenly appear to test his nerve and shooting power.

Should he be accompanied by a "boy" who is capable of spooring, all the better, for he may wound an animal which escapes, and has to be tracked up.

Before going further I would again like to explain that this small book is mainly intended for the use of the beginner—a sort of

vade-mecum for the African bush—and I have no wish to preach to the old hand who, through experience, has formed his own opinions regarding the subject of big game hunting in all its aspects.

There are several rules about walking-up game which are important, and here are three of them :

1. Keep the wind right ; that is, walk against the wind as much as possible.
2. Go quietly. Don't talk loudly, or allow the men to do so.
3. Walk fairly slowly, so as to keep a good look-out.

These three clauses are sufficient for the present, and they cover most of the points which are essential to good hunting.

The wind is usually fairly steady in the dry and hot season, except when it drops and is replaced by gusts of hot air, and these strange phenomena—"dust-devils," which come along in spiral swirls and pick up dust, grass, leaves, and even branches, and take them high into the air. Once a bandana handkerchief of mine which was lying loose was caught in a "dust-devil" and carried away. Being a brilliant colour, it was visible for a long way, until it was carried high enough to be out of sight.

These sudden puffs of hot air which often arise usually blow about the end of the dry season in North-Eastern Rhodesia. They often come up just as one is going close for the shot at game, particularly elephant, and many an approach is spoilt in this way.

In South Central Africa the configuration of the country is broken and undulating, timber is plentiful, and on the dambos, or grassy plains, there are generally a lot of anthills which afford splendid stalking cover. Before going further, let me warn the novice that

when he does the last crawl (if it is necessary to get so low) to be very careful about putting his hands or body on a poisonous snake. When crawling up to an eland I once put my hand on a puff-adder which, fortunately, was lethargic. Amidst dry leaves these snakes, or indeed many other kinds of serpent, are very difficult to see, so it pays to be careful, unless one is prepared to risk a horrible death. Most snakes are very quick in going off, as they either hear, or feel through their nervous system, the approach of man, and some of them, such as the Mamba family, bolt so fast that all one can see is a streak of the moving reptile. Although I have seen many hundreds of snakes, I know little about them, so I shall confine myself to the game, as snake stories in plenty are on record, some veracious, and others audacious !

Sometimes after starting off against the wind it may veer round a bit, so, unless one is bound for any particular spot, it is best to alter the course accordingly, and keep the wind blowing towards one as much as possible.

When game is shot at, has scented, or has seen one, it usually runs up-wind, but when badly scared will sometimes run down-wind so as to smell anyone who is following it.

In feeding, most animals walk against the wind.

If I were asked what was the most important characteristic for a hunter, I would answer a dogged perseverance, for that is the only way to wear down constant disappointments.

In the hot season, in the country north of the Zambezi, the heat is terrific during September, October, and the beginning of November—when the rains usually break and cool the air a little. To walk for thirty miles a day, through rough bush, under the scorching

rays of a tropical sun, which is like the breath of a furnace, is strenuous work. When one may do this for weeks on end in following elephants, it requires a lot of determination to keep it up until success comes at last. It is not so bad when one is fit, but if troubled with attacks of fever it is a different matter.

One of the most important things to remember is that one should never speak loudly when after game, as there is nothing which frightens animals more than the sound of the human voice. Natives, when they speak to one another, have a way of shouting, as if the person was a quarter of a mile away instead of being close. I see that I mentioned this at the end of the preceding chapter, but it is of such importance to the hunter that I let it stand.

Most tyros when they start their shooting career rush about too fast. The great thing is to move fairly slowly, because, when pursuing an even pace, it is possible to keep a better look-out. A man who rushes will also stumble into such impediments as holes, stumps, rocks, and branches, when he will make a loud noise, which may disturb game in the vicinity.

It is difficult to go quietly dressed, like the popular hero in a melodrama, with shiny stiff gaiters, tight breeches, and a solar topee the size of a round cushion, with a belt hung round with chattels like a Christmas tree. I have seen a young man turn out exactly like this, as he had a wonderful collection of implements, lethal and otherwise, arranged about his loins. There was a knife in a sheath (made in Germany, I think), with a long thick blade like a cutlass, a watch case, a compass pouch, a pipe in a case, a bunch of keys on a swivel, and a pouch for cartridges. Then over his shoulders was the sling of his binocular case and a bright aluminium water-bottle.

After a year in the bush this young fellow's sporting gear had depreciated to the extent of a belt with a few cartridges, a watch case, and a cheap but good "Bushman's Friend" knife in a sheath, which, with a rifle, is enough to carry about in the hot sun.

Some people prefer long khaki trousers to hunt in, and often tuck the ends into their socks, which is a good plan. Others, as I do myself, favour "shorts," cut off above the knee, and bare legs. This leaves one open to cuts, scratches, and the bites of insects; but "shorts" feel so free that one can move quickly in them and keep comparatively cool. Puttees are unbearable to me, for they are hot and prickly, and if rolled too tight check the circulation. In country where the "Chitaise" bean flourishes I sometimes wore light cloth gaiters which I made myself. They did not fit quite so well as a best pair of London-made riding gaiters, but they were probably more comfortable for African bush wear.

A khaki shirt with sleeves turned up, not cut off at elbows, because they are useful to turn down in thorns or "chitaisi" bean country; a double grey or brown "Terai" felt hat, socks, and light boots or shoes, according to taste.

When dealing with equipment I shall go into the matter of footgear more exactly.

When the grass all over the country has dried up, which varies according to the district and duration of the rains—it is usually about August or September—the natives start burning it. At these times, if living high up, one will see at night great fires raging over a large expanse of country. Thousands of young birds, tortoises, rodents, and insects must be burnt to death; and even young antelopes, which are unable to run fast enough to escape.

Several times I have got in front of such a fire, and had on one occasion to fire the grass and walk on to the burnt space with my men, so as to escape a fierce fire, which was coming on very rapidly as the wind was blowing hard behind it. The natives burn the grass to get the small animals, such as field mice and tortoises, but these conflagrations do an immense amount of damage to the timber, and I believe in some districts the Government tries to limit the practice. Often villages are destroyed when the natives are too lazy to keep the grass short in their proximity, and I have heard of three white men who lost their wattle-and-daub houses from this cause, one unfortunate losing everything he possessed, including his rifle and gun. Those who have wattle-and-daub residences, or brick houses with thatched roofs, should keep the grass cut short all round for a distance of at least 100 yards, as a strong wind can carry sparks a long way.

Although the sense of smell is strong in bush and forest game, the hearing of those species is also extremely acute.

Game which inhabit extensive plains trust more to their vision than anything, though at night, when the Carnivora are on the prowl, their senses of smell and hearing must be their main safeguard.

All wild animals probably see in the dark much better than do human beings, and I know this is a fact, because I have on several occasions examined the place where a lion has attacked a herd of zebras or antelopes, and noticed how the stampeded animals kept clear of tree stems and obstructions in their startled rush for safety. A lion, too, must see exactly what he is doing when he makes his attack, or he could not grip game as neatly as he does on dark nights.

In the dry season everything dries to tinder, and various pods

and leaves, as well as branches, reeds, and thick grasses all make a noise when trodden on. Perhaps the worst thing of the lot is a pod which goes off like the crack of a stock-whip. Many an animal has been scared off on the explosion of these vegetable crackers by some careless movement on the part of the hunter.

When the young hunter has sighted game, do not let him be in too great a hurry to shoot, unless the animal he intends to fire at looks like running immediately. It pays to get fairly close, and a good distance for all medium or large antelopes is about 100 yards. Every yard one can get nearer increases the chance of a well-placed bullet, but one can sometimes try to get too close and frighten the game away.

With such small buck as duiker, oribi, and klipspringer, I like to get within 60 yards or thereabouts for accurate work.

A large antelope, such as a roan, sable, or kudu, is so much bigger that it is not difficult to place a bullet in the right spot at 150 yards if one is steady. A most important point is to try and discern exactly the angle at which a beast is standing, because it naturally makes all the difference to the course of the bullet. One can kill game with the modern rifle at any angle. The best position is a broadside shot right through both shoulders, which, if fairly low, should get the heart, or if slightly too high, the arteries going into it, besides probably breaking one or both shoulders. I think the shot I prefer is a quarter-facing position, where the bullet goes in at the point of the nearest shoulder and breaks it, possibly gets the heart or arteries, and emerges through the opposite lung.

In a quarter-facing away shot the spot to aim at is the lung when the bullet does exactly what it does in the quarter-facing shot,

except that it is going the reverse way. A full-facing shot is also deadly, as the animal is raked. The place to aim for is the base of the neck, where it joins the chest. Head and neck shots are unsatisfactory, the former because one does not wish to damage the headskin, skull, or horns; and the other, because unless the neck bone or gullet is cut the beast may escape.

The effect of different wounds is as follows: When an animal is hit in the heart, or arteries above the heart, it usually gives a shiver, pulls itself together, and makes a rush for anything up to 50 yards, and then falls dead. Sometimes, but not often, a heart shot will drop a beast where it stands, and this oftener occurs to small and medium-sized buck than the larger ones, such as eland, roan, sable, kudu, and hartebeest, which usually dash away after a heart shot for a short distance before coming to earth.

A bullet through both lungs brings about much the same effect as the heart shot, except that the animal may run 100 yards or more before falling dead. Lung blood, as I have mentioned before, is frothy, being full of air bubbles, and is light-coloured. If only one lung is touched the animal may run a long way, and possibly escape if not spooed up and finished.

A sickening and disabling wound is one in a kidney, and animals do not go far when struck here. The blood dropped is very dark-coloured, indeed almost black.

The African antelopes are the toughest game in the world, and are wonderfully tenacious of life unless properly hit. Of the different species I have shot the hardiest are waterbuck, hartebeest, puku, and duiker. The latter is a veritable marvel at carrying away what one would imagine would be mortal wounds.

A bull eland, too, is very tough, and with a small bore rifle, such as a .256 or .275, I like to use solid bullets for them, and try and get the shot through the shoulder bone. Expanding projectiles have not enough penetration for eland.

With high velocity rifles (and even in the days of the black-powder express) the common error is to shoot over game at sporting ranges—that is, within 200 yards—so the young hunter should guard against taking his foresight too full. For one bullet that goes too low at least three go over a missed animal. Remember that for the shoulder and heart spot that organ lies low in the chest cavity, so below a medial line is better than above it for the heart shot. For the lung shot the spot is higher and farther back.

The young hunter should never approach fallen game without a loaded rifle ready to fire if necessary, for wounded animals which are sitting may get up and run away. When a beast is stretched out flat on its side it is usually dead or *in extremis*.

Always put a finishing shot into a beast that is sitting, and never approach sable or roan antelopes when in this position, for they may then be dangerous.

Both these species can strike very quickly with their horns, and one lunge that gets home would go clean through a man's body and kill him as effectually as a spear wound would do.

The gemsbuck of Southern Africa, and probably the oryx of East Africa, are also inclined to take the offensive under these circumstances. No man with sporting feelings can resent a wounded animal doing so, but one should be careful with any large antelope, because they have great power in their necks, and have usually very sharp horns.

I have heard of a sable bull killing several dogs with successive sweeps of its horns, and if a dog cannot jink a blow it is unlikely a man could do so.

Of course, none of the antelopes are considered to rank as dangerous game by the experienced hunter, for these are the elephant, lion, buffalo, rhino, and leopard.

Some say that the elephant is the most dangerous, and others give the palm to the lion and buffalo. It is difficult to say, and it depends on circumstances.

Personally, I agree with Selous, that the lion is the most dangerous, because he is so quick in attack, and can take cover so easily ; and is thus closely approached before he is seen.

A good many men have been knocked down by elephant and lion and escaped, but fewer have escaped from a buffalo once they have been caught.

During the time I was in South Central Africa I heard of eight white men being killed by elephants, and one by a buffalo, and I think two also by lions ; which proves that elephants were much the most dangerous animals in that country. However, they were more hunted than were buffaloes and lions, which probably accounts for the difference. In Kenya Colony many more hunters have been killed by lions than by any other animals.

Many young men have been killed by their first elephant, or other dangerous animal, and this has usually been due to firing a careless first shot. As I have mentioned in my previous books, the first bullet is the all-important one, because the hunter usually has time to pick the spot he wishes to hit when the animal is quiescent. After it is injured it is less likely to be still for long, and subsequent shots

are often taken when the beast is running, when the chances of hitting a vital spot are much more difficult.

But where the beginner often errs is that instead of going close up for his first shot he may think this too dangerous, so he lets go at say an elephant, or a buffalo, at 100 yards or more, and wounds it, with the result that it goes off. Then still being keen to bag it, and likely imagining that it will always pursue the tactics of bolting after being hit, he follows on immediately and rushes through all kinds of bad cover. He sees the natives also keen, but he forgets that when an animal proves nasty the agile Bantu can run and jink like a wild pig, and is seldom caught.

Let the white man try to run in the worst of bush, often dressed in too heavy clothes and boots, and he has not gone 10 yards before he comes a cropper over some impediment, and his rifle flies out of his hand, or gets the muzzle choked-up. That is why "shorts," bare legs, and light boots, or shoes, are best, for then one is free and not over-weighted for running fast.

I think if charged in thick bush or reeds the best thing to do is to keep on shooting ; trying, as I describe in my chapter on "Rifles," to keep the magazine full by inserting an extra cartridge when time permits. Elephants, rhinos, and often lions can be turned off by several shots in quick succession, but the buffalo has usually to be felled before he can be stopped, as he is a most determined animal when he has made up his mind to take the offensive. With elephant the best spot to hit him in such circumstances is low in the head, and with rhino, lion, and buffalo, in the chest. All animals' hearts lie fairly low in the chest cavity, and are below a line (imaginary) drawn longitudinally across the middle of the body.

When following a wounded elephant he may be seen standing facing away with only his back showing. A deadly crippling shot is about 2 to 3 feet above the root of the tail, especially with a big bore cordite rifle. Even with a .303 I have anchored an elephant with this paralyzing wound, and he was unable to move sufficiently to turn round.

There is a diversity of opinion amongst hunters whether the head or heart shot at an elephant is the best. This depends a good deal as to the relative position of the game and the hunter. The head shot is the more humane, for if the brain is punctured the animal collapses at once. In fact, I have seen one fall so suddenly with a brain injury that both his tusks went into the soft ground up to the gums. Should an elephant escape with a head wound he will almost invariably recover, which is seldom the case with bad body wounds.

When broadside on, about 4 inches forward of the ear orifice is correct so as to get the brain, and the spot to be hit varies according to the angle, which will be easily understood.

For the heart, fairly low right through the shoulder, with similar variations according to position. I know of many elephants being lost through men firing too high for the heart, and it is best to err by being low. The old fallacy about the edge of the ear being the correct place for the heart shot is incorrect. I have never seen an elephant with an ear large enough to droop low enough to cover the heart, though some races of the African elephant have huge ears. The back edge, however, sometimes comes so far behind as to cover the lungs.

A strange result of a bullet through both lungs is that the elephant,

after running for two or three hundred yards as hard as it can go, stops and puts its trunk high in the air several times, and then falls dead. It is evidently caused by the animal choking due to a suffusion of coagulated blood in the lungs.

In very hot weather it is sometimes possible to get up to elephants which have bolted by running after them, especially if they are thirsty and already tired.

It is best to go up to the game by oneself for the shot, and leave the men behind, telling them not to talk, and not to change their position until told to do so.

I once lost the best tusker I ever saw, just as I was going to fire, by the elephants (there were three) getting the wind of my men, who had moved from where I had left them. Though I followed on their spoor it was hopeless, as in that locality the elephants were so much hunted that once they were frightened they might go for 50 miles without stopping.

Elephants can wind human beings quite a mile off if the wind is steady and strong. Their hearing is fairly acute, but their eyesight poor. They are grand animals to hunt, and their pursuit will tax the hunter in a greater degree than any other type of hunting. The work of spooring them in the heat, through a dried-up country, is simply gruelling.

After the grass fires the fine ash gets into one's mouth and nostrils, which, added to the hard exercise in the blazing sun, combines to make the sport the hardest test a man can endure in tropical Africa. If a man is not thoroughly fit, and finds his nerves won't stand the strain, he is better to confine himself to less strenuous sport.

As elephants take one into waterless country, water should be carried in sufficient quantity to last with care all day, and possibly the next night, as elephant-hunters have sometimes to sleep out. I usually got my men to carry two large gourds covered on the top with bits of a plantain leaf, or other leaves. The water in gourds gets tepid and even hot in the intense heat, but I liked them better than canvas bags, because a bag always loses a big proportion of the contents by evaporation, though what is left is always cool.

I seldom drank plain water, and one of my men always had a native wickerwork basket with a small kettle, some tea and sugar, and a few biscuits or scones. If I thought I would probably need to sleep out I added a tin of meat or biltong to the contents. There is usually the spoorer, and from three to four men carrying the basket and gourds. Some of them will have a native axe, and one should always be taken for various work. The tracker (when the party has found a good spoor) and white hunter go ahead, and the men follow about 200 yards behind, being told to keep silent. I have always given the tracker my cartridge bag and camera, but seen that I had my rifle loaded, and enough ammunition in my pockets as well. Three or four clips of .256 do not weigh much or take up much room. If a second rifle is carried by a gun-boy he should follow just behind his master, as the rifle is useless unless near at hand, but I have never had much use for them, as I have previously explained.

It is marvellous the difference success makes in the appearance of a party arriving in camp after a long and hot trek after an elephant. When unlucky, they return quietly and subdued, the white man like a sweep from the fine ash of the grass fires, and his eyes glazed with

the burning rays of a torrid sun. The natives, too, look dead beat. But if successful, everyone will look happy, and the men on approaching camp will ask permission to sing, their songs usually extolling the prowess of their master as the hunter who has supplied them with so much luscious meat and possibly fat. They will probably have a big chunk of the trunk, and the tracker, as he gets within sight of the tent, will wave the tail in the air, which shows to those who have not come out that there are big feeds of their beloved *nyama* (meat) in prospect.

The unsuccessful days, however, may prove more useful than the successful ones, because they may afford lessons showing that some mistake has been made which has caused failure.

The experienced hunter takes good and bad fortune just the same, for he knows that by patience and perseverance his luck is sure to change in the end, if he only keeps going long enough.

Notes on the Elephant, Rhinoceros, and Hippopotamus

CENTRAL AFRICA has a wonderful wealth of fauna and much game still exists in the wilder parts of that country, and through strict game regulations it is to be hoped that it will last for a long time in the future.

The following notes of the game mentioned in the above heading, as well as those to follow on the smaller animals, refer to the territories of Nyasaland, Northern Rhodesia, and Northern Zambezia. I mention this because it is known that the habits of game vary slightly in different localities in Africa, due probably to the extent the game is hunted by white men and the indigenous native inhabitants.

In the countries I mention much molestation made game shy and wary, particularly elephants ; but I believe in parts of Kenya Colony those animals, instead of being inclined to bolt as soon as they scent, see, or hear human beings, are apt immediately to act offensively. After all, one cannot blame them for doing so, as it must be very uncomfortable for almost every pachyderm who gets within 100 yards of a white man to receive a bullet in a non-vital part of his anatomy, for I believe many carry old wounds !

It is unfortunate for elephants that they grow a substance which is so valuable and so much sought after as is ivory. To exist he has to eat much food, so when natives are killed, or have their fields ravaged by troops of elephants, the Government is obliged to take

steps to reduce them, and frighten them sufficiently to prevent them invading the fields or gardens; and white settlers equally dislike their crops being ruined in the same way. Therefore, I think game preservation is incompatible with the settlement of African territories as regards the larger game, so that in the course of time animals such as elephants, rhinoceroses, and hippopotamuses will disappear completely before the advance of civilisation. Except in headings, I intend to refer to the latter two species as rhino and hippo, as Science has given both these creatures absurdly long names, and no one in the countries I write of ever thinks of referring to them except in these abbreviated forms.

The records of all the game I mention are taken from Rowland Ward's useful and descriptive work, *Records of Big Game*, 8th Edition. Any young man who gets a trophy approaching anything mentioned will be lucky, so in most cases I give the size of an average specimen in the countries I deal with.

As with the habits, the measurements of trophies vary in different countries. For instance, the elephants of Nyasaland seldom grow tusks over 70 lb. or so, whereas in the equatorial regions they often exceed 100 lb., and when we come to some of the other game, such as buffalo, there is also a difference to be found. I shall now proceed to describe the elephant, the finest animal in Africa. (N.B.—♂ means Male; ♀ Female.)

ELEPHANT

(*Elephas africanus*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA .	Njobu.	CHINGONI .	Nkblouu.
CHISENGA .	Njovu.	CHIKUNDA .	Mzou.
CHIYAO .	Ndembo.	CHIWEMBA .	Zofu.
CHIBISA .	Nzovu.	SWAHILI .	Tembo or Ndovu.

Heaviest tusk known (♂), 226½ lb. British Museum.

Longest „ „ (♂), 11 ft. 5½ in. American National Collection.

Average height of adult male, 10 ft. 6 in.

A good tusk in Nyasaland and Northern Rhodesia, 60 lb.

Approximate weight (♂), 6½ ton.

Scientists have divided the African elephant into five races at present, and in the course of time it is quite possible that they may still further add to the list. This differentiation is due to variations in size, the shape of their ears, and so on; and I think it has been overdone. The only race which shows much difference is the Dwarf elephant of the Congo. I believe this animal has become stunted in size because it inhabits dense forests, which, as in the case of the human inhabitants, the Pygmies, and the small hippo of the same region, has had the affect of retarding its height and weight.

The elephants of the countries I write of are among the largest in Africa, and a height measurement of 11 feet at the shoulder is not uncommon. I shot an elephant a good 12 feet, I believe, but I could not measure him, as in death he lay against a tree in a crumpled-up position. The natives all said he was the highest elephant they

had ever seen, and as at that time their country was full of these animals, they knew what they were talking about.

The ivory of Nyasaland and adjacent territories (though tusks of much over 70 lb. weight are rare) is amongst the best to be found in Africa, as it is nearly all of the "soft" variety, which brings the best price in the market. The "hard" kind is mostly found in Western Africa, and is not so valuable.

Elephants roam about in herds of from five or six beasts to several hundreds. The average-sized troop in Nyasaland and Northern Rhodesia is about twelve or thereabouts. When two hundred or more are seen together they have probably packed to trek away to some district where some favourite food is to be obtained, such as plum-like fruits, called by the natives *masuko* and *mauni*. Much of this fruit when ripe falls to the ground and the elephants begin by eating it. Then when no more is left they shake the trees and bring down more, but when it cannot be dislodged they break down the trees. I have seen many acres of trees of all kinds felled to get such fruits, or favoured leaves also eaten by elephants. Most of these trees measure from 25 to 35 inches in circumference, which shows the great strength of the animals, for it must be remembered that these trees are tough growing timber, and not dead wood. The largest tree I ever saw broken by a bull elephant was one with the native name *nkuyu*, a rather soft and stringy kind of wood. Below the break it was $52\frac{1}{2}$ inches in circumference. I heard the crash of the top falling, and got to the place just after the elephant had moved on. In my book, *Wild Life in Central Africa*, I give an illustration from a photograph I took of this remarkable feat of strength.

The striking features of elephants are their strength, their walking powers in traversing great stretches of country, their wonderfully chosen footpaths over high ranges, and the destruction they do, not only to natural growing timber, but to the crops of the native inhabitants.

Aged elephants do not mix much with the herds, which consist of cows, calves, and young males growing tusks from 20 to 40 lb. These old bulls usually go about by themselves or consort with others of their own age and size. Probably in the breeding season they join the herds for a time and then return to a lonely existence. Bearing large tusks, and having been much hunted, they get extremely wary and spend their days in the thickest cover to be found in the locality, and only leave these places in the darkness to feed in the open, to drink, and perhaps invade some native fields in the vicinity.

I have been camped in a village where a herd of elephants came and began breaking down the *ncokwes* (grain bins) to get the maize, and on another occasion the animals, finding the natives had removed their remaining grain to the inside of their huts, they broke into two of them through the thatched roofs, before they were driven off by grass flares and by lumps of earth thrown at them.

Elephants are fond of salt-licks and chew the mud from white anthills as this earth has saline qualities.

Either when drinking in stony streams or by swallowing stones got out of anthills, they sometimes have quite a collection of these in their stomachs ; and I have several times found a quantity inside them, once getting as many as would have filled a small bucket.

In walking they go in single file, and only spread out when

feeding and drinking. Their paths, often used for ages, are very smooth, and where they pass over flat boulders of rock it will be found worn down through the constant rubbing of their gritty feet, especially in the rainy season, when their feet are generally muddy.

Elephant paths are a little wider than native footpaths, and as a rule they go straighter, which is natural considering the power of the beasts in breaking down impediments.

In flat country one could almost use a bicycle along their paths, so smooth are they in places. Of course in bush and grass the boughs and reeds spring back and obstruct the passage for man. The thick and thorny stuff elephants penetrate with no more trouble than it would take humans to go through a grass field, is remarkable, but then it must be remembered that their muscular strength and weight are enormous. A big adult African bull elephant weighs about 7 ton, so it is indeed strong cover which can resist such pressure.

A remarkable point about elephants is the way they surmount hilly ground, choosing always the easiest gradient ; so human beings crossing such country cannot do better than follow them when the direction leads in the way they wish to go.

Elephants, considering their great weight, tread very softly, for their feet are like rubber cushions. The interior of the hoofs is full of springy fat muscle, and they seem to be so flexible that they act something like rubber tyres on a motor car.

Sometimes elephants when glimpsed in thick bush and grass will slip away like gray shadows, and as their great forms often appear like the dark shade cast by thick trees, one hardly realises when they have gone that they have really disappeared.

The old bulls who go about alone, or consort with one or two of the same age, are generally silent ; but the herds of cows and young bulls often make much noise, such as trumpeting, screaming, and making strange gurgling sounds. They do this occasionally when feeding, and often when drinking.

A wounded elephant often screams shrilly, but on the only two occasions I have been properly charged by an animal intent on mischief the beasts were silent, and all one heard was the ominous sound of their running feet in the vegetation they passed through. An elephant is easier to turn with a bullet than a buffalo, but I have seen one ignore several bullets without their having any effect, and it was only a final shot in the brain which stopped his rush by bringing him to earth. So when the beginner reads that a charging elephant can always be turned this is not exactly correct, though it may hold good as a general rule.

Elephants and buffaloes often stampede, and rush past the hunter, and I have often had this happen, but even when a beast is heading straight for one this is not a real charge with intent, for the animals are only trying to get away. I am afraid some men would call this sort of thing being "charged," which is nonsense. There is no mistaking when a beast intends to be offensive, and personally I would not refer to a beast which is trying to take reprisals on the person who has wounded it as a "nasty brute," as I have read more than once.

One can sometimes hear the branches being pulled off trees with a rip and crash, and if close see a beast twisting it off with a sinuous movement of its trunk. The first elephant I ever shot was in the act of doing this when I hit it at the base of the throat and it sent

the branch flying as it reeled back and collapsed, for the bullet cut an artery above the heart.

Elephants do not seem to have very strong eyesight, but they hear well, for the breaking of a stick or dried pod is audible to them when fairly close. Their strongest sense is smell, and I am sure that they can scent humans quite a mile off, if the wind is steady.

When it is calm I have seen them flapping their ears in and out, this action apparently being done to concentrate the air so as to get the scent of danger.

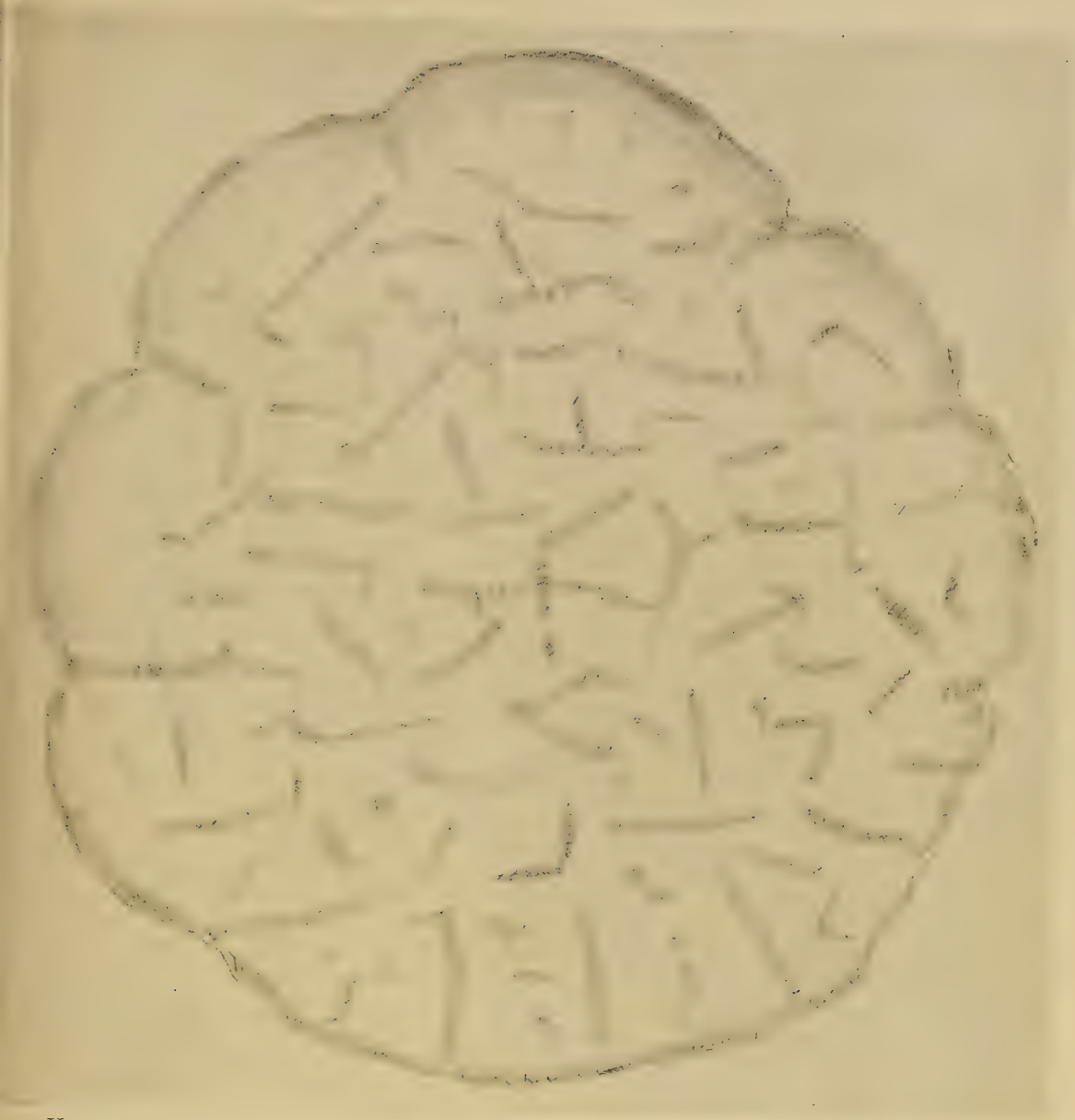
They often scrape with their feet to collect dust, which they suck up in their trunks and blow over their bodies just as they do water. How the heated dust can cool them I do not know, but they often do this.

When spooring up an elephant (or a herd) and within a short distance, one can hear strange stomachic rumblings, just like water gurgling in a cistern, and this shows their digestions are working at high pressure, I suppose.

One of the best signs when getting close is to find steaming droppings, and if they are not quite recent the native tracker will break one with his foot to see if it is hot inside. The great heat of the sun keeps them warm for some time, but should they fall in the shade, they, of course, cool more quickly. In dried river beds I have seen the droppings lying thickly, and when old they make excellent kindling to start a camp fire.

Elephants, when short of water, dig holes with their feet in the sandy beds of dried-up streams, and such places are then used by other game as drinking-places.

In the hottest months, September, October. and the beginning



ATE II.

ELEPHANT (♂)
(One-third life-size).

Note the impressions of cracks in the foot. These are often a help in spooring an individual animal.

of November, I believe elephants seldom pass a night without drinking, but if the weather happens to be cool they will go two nights without water.

When much hunted, they travel for quite 50 miles to get water, and seldom drink twice running in the same place. Some of the food they eat must supply them with a certain amount of moisture, just as certain vegetation seems to take the place of water in some antelopes which inhabit waterless regions.

They eat many kinds of food, such as *msatsi* (castor oil plant), shoots of bamboo, Matongo orange, *masuko*, pods of *msekesi* and *chitimbi*, *sasama* (a marsh plant), leaves of *kokamoli*, *changu-ruma*, and many other tree leaves ; besides raiding native gardens for maize stems, pumpkins, ground nuts, and sweet potatoes. Bark, such as that got from trees with the native names of *jombo*, *mseza*, and *mkubuu* is liked by them, and when following them one will often see chewed stuff dropped by them.

After bathing in a pool they often rub themselves on a tree or rock, and it is possible sometimes to get a rough idea of an animal's height in this way.

When the natives start the grass fires, as soon as it is dry enough to burn well, old decayed trees are set alight, and may keep smouldering for weeks on end. Elephants apparently omit to perceive how hot they are, and by rubbing on them get bad burns at times.

In thick cover it is often difficult to see the tusks well, and as elephants sometimes have only one tusk, having lost the other through an accident or by fighting, plenty of men have had the disappointment of killing an elephant and finding only one tusk. Occasionally one may come across a tuskless male which has never

grown any tusks, and these animals are more feared by the natives than the tuskers, for they say they are always very bad tempered and inclined to charge. There are various native names for such tuskless males, such as :

NATIVE NAMES

<i>Language.</i>		<i>Native Name.</i>	<i>Language.</i>		<i>Native Name.</i>
CHINYANJA	. .	<i>Nyungwa.</i>	CHINGONI	. .	<i>Kamgwara.</i>
CHIKUNDA	. .	<i>Mowi.</i>	CHIYAO	. .	<i>Nachuula.</i>
CHIWEMBA	. .	<i>Tondo.</i>	CHIBISA	. .	<i>Nachuula.</i>

The Chiwemba word *tondo* is the name of the elephant-nosed shrew which gave that tribe the idea, I suppose, of bestowing the name on a tuskless pachyderm.

There are various names for different sized tuskers amongst the Chikunda tribe, and they call males with tusks of about 20 lb. each *golongwa*, bulls with tusks of from 30 to 60 lb. *batwa*, and exceptionally large tuskers *pinga*. Then, for describing cow elephants and their tusks they use the word *hurukazi*. This word *hurukazi* apparently is derived from the synonym used for woman or female, which is *nkazi*.

When an elephant gets an injury to its tusk either through an accident or a bullet, it suffers agonies, as the nerve is most sensitive. I once saw an elephant smashing its head on trees and behaving as if it were mad.

After it was dead I found one tusk had been broken off close to the gum, and the nerve matter was in a putrid condition, which had apparently driven it almost demented with pain.

Should an elephant be shot through both lungs it may run some hundreds of yards and then stop and hold its trunk high in

the air several times. This is a sign it is choking and trying to get air, so if an animal is seen doing this one may know it is at its last gasp.

With a brain shot it sinks down, sometimes so suddenly that its tusks go into the ground. With a heart shot it rushes off to fall within a hundred yards or so, and the same effect follows the arteries above the heart being cut. With one lung penetrated it may run for miles, but when both are punctured it will not often go farther than half a mile, especially with a large bore bullet wound.

The brain shot is the most humane, for if that organ is missed the animal is pretty sure to recover, which is not the case with a non-vital body wound, as this may suppurate and prove vital in the course of a week or more. A beast hit in the body rushes about and frightens the others more than an animal which instantly falls with a brain shot.

The great thing with elephants is to get close and make sure, and this is easier and less dangerous when tackling a single beast than when there is a large herd.

When the picked bull is surrounded by a crowd of smaller bulls and cows it is no joke working through them, and such a procedure is usually impossible, as they would certainly get the wind and bolt, or prove nasty as the case might be. In such circumstances a cow might charge, for they are often more inclined to be unpleasant than the bulls. However, the females are much more easy to kill than the tougher and larger bulls, and are not nearly so tenacious of life.

In the shade of dense trees and bush it is difficult to see the exact angle a beast is standing in, and until this is definitely known it is a mistake to fire. My frontispiece explains the true position of the

brain, inside the massive skull, and broadside it is roughly from 4 to 6 inches forward of the ear orifice. Different angles need varied placing. For the heart, the correct spot is about 15 inches below an imaginary line drawn longitudinally across the body.

Of course, as I think I have mentioned before, only solid bullets should be used for elephants, as penetration is essential so as to drive through hard bone, flesh, and muscle. It is remarkable how the modern small bore can kill such mighty beasts, and to see a big bull elephant crumple up to a .256 bullet always strikes the natives as a kind of miracle or *nfiti* (witchcraft).

Elephants do not often charge from a greater distance than 50 or 60 yards, although one which came for me started from twice that distance after having received two bullets. In charging they usually keep their trunk curled under their chest.

The largest elephants in height and weight of ivory do not always have the biggest feet. A spoor measuring 18 inches across is a good one, but some reach a diameter of 22 inches, which is, however, exceptional.

The track made in hard ground is likely larger than a measurement taken after the beast is defunct, because the great weight of the beast presses out the foot considerably when it is erect and moving.

Pieces of stick are sometimes found in the temple ducts of elephants, and I once read a theoretical statement by an arm-chair naturalist that the elephants plug them up themselves, and I wished to suggest that they would next be credited with picking their teeth with bamboo toothpicks!

These ducts, or glands, have something to do with their sexual instincts, and in both sexes they periodically exude matter. When

an Indian male in captivity shows signs of going "must" (mad), these glands nearly always show his keepers that it is time to put him under extra control by chaining him to strong trees.

When breaking through thick bush it is natural that a bit of stick gets into a duct at times, which is a much more logical explanation than that the animals plug them intentionally.

No one knows exactly the period of gestation in the female African elephant, but it is known that the Indian elephant goes for 22 months for a male calf and slightly less for the female, so we may suppose the time is much the same in the African species.

How long an African elephant lives is another problem about which there is no exact information, but there is little doubt that their lives are prolonged for quite 150 years, and possibly for a slightly longer period.

African elephants have been caught and trained to do light work in the Congo Free State, but up to now only cows and young bulls have been used, and I doubt if it will ever be possible to utilise the old bulls, for they are too powerful and irascible to take to domesticated work. It has been pretty well proved that the cost of capturing, training, and feeding does not cover the value of the work they are capable of performing, so it is unlikely that the African elephant will ever be used to any extent in the future for domesticated purposes.

The natives are very fond of elephant's flesh and they believe that to eat it gives them strength and courage. Being full of moisture it shrinks a good deal when dry, and the natives seem to like it high, for I have often seen them enjoying it when green and putrid, and also seething with fat maggots.

I cannot forget some of the nights I have spent near an elephant carcase that has been dead for several days and lying festering in a scorching sun.

A few hours after death the body swells up greatly until it resembles a balloon. When the bowels are opened there is at first a hissing of high-pressure air, and then a sound like the whistle of a steam-engine accompanied by a shower of fluid. The natives, in their frenzied efforts to cut up the meat, do not seem to mind being covered with this visceral matter, although I have seen them amused when some one gets it right in the mouth or ear.

As soon as the inhabitants of villages in the vicinity of a kill hear of it, the men hurry out with knives and axes, accompanied in the rear by their wives and daughters with baskets. I never let them start on the cutting-up until I had got the tusks out, as they get in the way, and I always reserved a part for myself to use as barter for native produce, such as eggs, tomatoes, and sweet potatoes. Then, when I allowed them to start in, there was a scramble and lively proceedings indeed. I liked watching these shows so much that I used to sit under a tree or bush on the windward side and have tea and a smoke, and spend several hours enjoying this scene of primitiveness. Occasionally I had to attend to cuts or settle disputes, which, however, seldom came to blows. Sometimes the old women would use their claws on each other, but I only once saw a man threaten another with his knife. In this case I told my men to bring him to me, and I made him sit down for ten minutes and miss the chopping, and I am certain from the sad look on his face that he would have preferred ten strokes with the *chikoti* (hippo whip) than have missed these ten minutes of meat-carving.

When the tusks are out there is a queer custom connected with the removal of the nerve matter. An old man is called, and he gets the tusks taken behind a thick bush, or an anthill, and after they are cleaned he fumigates the hollows of the teeth (elephant tusks are often called "teeth" by hunters) with a wisp of burning grass. If young unmarried folk witness this operation, they are supposed to become infertile—a strange and senseless idea.

If the carcase is left for about a week, natural decomposition will enable the tusks to be pulled out by hand in most cases. When they are extracted it will be found that they are covered with a greasy rancid matter, like yellow butter, which doubtless acts as a kind of lubricant. It is unwise, however, to leave an elephant in the bush, because hyenas might damage the ivory or natives steal it.

When the women go off home with their baskets full of dripping flesh I have seen it dropping over the infants carried in a cloth, or goatskin, on their backs. This was very noticeable on one occasion when they had come to remove the meat of an elephant which had been dead for some days and was in a putrid and horrible condition. I never felt so sorry for native babies as I did when I saw them being drenched with this stinking fluid. When I pointed it out to several of the mothers they all said "it was nothing"!

Natives are fond of bracelets made from ivory, and also cut the same ornaments out of the hoofs. The tail hairs are likewise made into bangles and rings, and these amongst the young women of Europe are supposed to be lucky. Some of the hairs are white or amber-coloured. Aged elephants lose many of their tail hairs, and in some animals there is nothing except a few short hairs left.

Dr. Cuthbert Christy, in his interesting book, *Big Game and*

Pygmies, mentions how some of the forest elephants of the Congo grow extremely long hair on their faces, those on the chin frequently being about a foot in length. I have never seen in the countries I write of such hairy elephants as this. The older the animals become the more furrowed is their skin, and looking at a big elephant from behind the hide looks so flappy that one would think the animal, if he wore trousers, was in danger of them falling down.

I have read correspondence about the way the ear is folded, in which it stated that the curl at the edge was outwards. Out of the many elephants I have seen all their ears had an inward fold, which is the natural way one would imagine for comfortable progression.

Many elephants' tusks slope inwards, but even in the more forest-loving races the points of the tusks often have an outward curve, which must certainly be awkward for animals frequenting heavy bush and forest. Nature does not seem always to provide its creatures with the best facilities for living under certain conditions, or points like this would not occur.

The skin of the elephant is not much used, and it is even thinner than a rhino's, and not a quarter of the thickness of a hippo's hide, which is much used for whips.

I have had a spear shaft decorated by my natives with the thin skin of an elephant's ear, and they sometimes use it to make a gunstock stronger at the hand-grip, by binding it on green and allowing it to dry and shrink, when it becomes very strong and rigid—so long as it does not get too wet, when it is apt to stretch slightly.

The best food from the elephant, from the white man's point of view, is the heart, but I often enjoyed the trunk when boiled for quite twelve hours. It is rather like a hard type of brawn. The foot is

sometimes liked, and the best way to cook it is to dig a hole in the ground and put some hot embers in it. Then it is covered over with earth, and a fire kept burning on the top for at least twenty-four hours. It always tasted to me rather greasy and insipid, and the trunk was my favourite ; although a little of that tough meat goes a long way in satisfying one's appetite in the tropics.

Elephants are good swimmers, and when following a herd of them near the Loangwa River I saw them descend a steep bank and take to the water. This troop consisted of about twenty animals, comprising a few herd bulls, cows, and several calves. The latter did not seem to like it, but eventually they all got across. The way they took the precipitous bank was interesting, for they spread out their front legs, sat down on their buttocks and slid over, sending clouds of fine dust flying, which hung in the air for some minutes after they had gone.

The worst country to follow elephants into is thorn-bush and heavy reeds. The first catches one's clothes and skin, and is most painful and dangerous work, for if a beast turns nasty it is impossible to run far without being held fast. The only thing to do is to shoot, and keep on shooting, at any animal which comes for one.

Reeds are bad, because the stems, which are lying in all directions, trip one up almost at every step ; so the same advice is necessary when dealing with an infuriated elephant in such places.

There is a kind of reed in Nyasaland and Northern Rhodesia often found on the banks of rivers, and in swamps, called by the natives *matete*. It is truly horrid stuff, for each frond or point is stiff and sharp as a needle. It is dangerous for the eyes, and very painful to bare skin. Even the natives, whose skins can stand a good deal,

dislike it intensely. I cannot forget some lively days when I had to go through this stuff when following elephants. When the papyrus plants are in flower they are beautiful, especially with a wind tossing about the flowered heads.

In swampy country elephants make deep tracks, and I have seen them quite 3 feet in depth.

Open spaces in forests, called *dambos*, are often wet, and in such places it is difficult to follow a spoor directly, so one has to make detours and get round. As a rule elephants are easy to track on soft ground, but in hard rocky country spooring often becomes most difficult, and only a few scratches may be all there is to see, and these sometimes take a long time to find. Should a bull be with a herd he may, on becoming suspicious, leave the other animals and pursue a course of his own. One may miss the spot he broke away, and on getting up to the herd find he is not there, which is one of the many disappointments the elephant hunter has to face.

In thick forests the leaves sometimes lie to the depth of a foot or more, and this is by far the most difficult ground to spoor on. The beast's feet are so soft that, even with the weight above them, hardly a mark will show on the earth below, and the best thing to do in country like this is to take a sweep round and try to pick up the footprints on easier ground. Fortunately such leafy spots are in patches, and seldom extend for a great distance. In following elephants, however, one can often trace their movements by watching the trees, which show freshly broken branches and fresh leaves dropped on the ground. Then there are the droppings, for elephants leave a lot behind them at times.

There is a strange thing about the lungs of an elephant, which

are not enclosed in a sack, but are attached to the vertebræ and walls of the chest. In all other mammals the lungs are in a bag.

Most people have likely read stories, mostly fiction, of vast deposits of good ivory which may be lying in what are called "elephant cemeteries." This is nonsense, for ivory would go rotten when lying exposed through one or two rainy seasons under a tropical sun. I once saw several tusks dug up which had only been buried for a few months, and most of them were rotten. One or two were just like putty, and one could squeeze a thumb-nail into them. Apparently the damp and heat had started a disintegrating decay which would in a couple of years or so have completely rotted away the whole substance. In great dry heat ivory cracks badly, and to show how much moisture is in ivory a tusk weighing say 50 lb. when shot will lose several pounds in a few years. The best thing to preserve the ivory kept as trophies is some beeswax softened and rubbed in, and it would be a good thing to treat the hollow as well as the outside in the same way.

In Siberia, mammoth tusks are occasionally found fairly sound, but when this is so I fancy they have been preserved by the earth being frozen so hard that little air or damp can get at them.

Possibly certain chemicals in the soil may act as preservatives, too, or ivory may be able to stand cold better than tropical damp heat.

One seldom comes across a dead elephant, and that fact has doubtless originated the idea of the supposed cemeteries of remains including ivory. What happens is, I believe, this. When an aged or badly wounded elephant instinctively feels his days are numbered, he will naturally go away alone (for animals are usually unkind to the weaklings, and this point has certainly something to do with "the

survival of the fittest"); and the animal will certainly make for water in fairly flat country, for some rivers can only be reached by going down steep banks.

Therefore, marshy low ground will likely be chosen, and there the elephant will likely get bogged, and being too weak to struggle out will eventually go under and disappear completely. Possibly there are favoured spots in certain wild country where this often occurs; and possibly, too, ivory immersed beneath the water may be preserved for many years in good condition, but on the whole I doubt it.

Natives used to trap elephants in pitfalls, and I have often seen these holes. They are not so large as one might suppose, as the object is not to enclose the whole beast, but to jam its legs and feet so tightly that the animal cannot work them about and free itself.

If the hole were big it would soon get out by breaking away the sides. Then spears are used suspended on an overhanging branch, which are released by the animal striking a bark-rope which leads across the track underneath.

In some parts of Africa an ingenious noose is laid flat over a shallow hole, with a running knot, and a heavy log is fixed to the rope, which gradually tires the animal and enables the natives to overtake him. Then some natives hand-stab a beast by waiting on a bough, and such tribes as the Wandorobo use poisoned spears, while the Pygmies of the Congo use poisoned arrows.

In the old days natives are said to have killed many elephants by driving a herd into a swamp, but I doubt whether—except under the most favourable conditions—elephants could be so treated, for they have great dread of getting bogged. One has only got to see

the care an Indian trained elephant takes not to go on doubtful ground. Possibly a herd that was badly frightened might go into such ground and become bogged.

I have seen elephants go through a fierce grass fire, and this without being driven, but only because they had got the wind of humans, and it was mainly by grass fires that the natives are supposed to have made them bog themselves.

Elephants occasionally¹ help one another, and I have seen several instances of this myself, but as these facts are mentioned in my book, *Memories of an African Hunter*, I need not repeat them here.

Certainly such cases are quite exceptional, but they do occur at times. Animals, as a rule (excepting mothers and their young) do not bother much about the fate of their companions, for their main efforts are always for self-preservation, and human attributes, such as chivalry and heroism, have no place in their natures. Possibly there may be a few exceptions, such as a lioness which attacks when a lion is shot, or a cow elephant which charges when a bull falls, but the domestic dog is the only animal likely to aid his master or mistress when trouble threatens them, and when a wild animal attacks when a companion is injured I fancy this is solely due to aggression alone against a common enemy, and not on behalf of its kind. However, it is extremely difficult for human beings to suggest reasons for the various actions of wild creatures, for at the best it can only be supposition.

Before closing these notes on the elephant, I might add a few lines on the shooting of the animal.

¹ This only amounts to propping a wounded animal up, and I doubt an elephant attempting to raise a fallen beast from the ground.

For brain shots nothing is better than a small-bore rifle such as a .256 or a .275, used, of course, with solid bullets (see Frontispiece). For body shots I think a novice might be safer when using a .470 or some such large bore, because they have a greater striking energy.

When he gains further experience, doubtless he will find that he can do just as good work with the smaller weapon he uses for antelopes, for accuracy is quite as important as striking power even against such a mighty animal as an African bull elephant. By writing this I do not mean to infer that .470 rifles are not accurate, but there is no doubt it is easier to shoot straight with a small bore than a large one, and a small bullet in the right spot is better than a big one in the wrong.

THE BLACK RHINOCEROS

(*Rhinoceros bicornis*)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA	. <i>Chipembere.</i>	CHINGONI	. <i>Mkhombo.</i>
CHIYAO	. <i>Chipembere.</i>	CHISENGA	. <i>Pembere.</i>
CHIKUNDA	. <i>Ntema.</i>	CHIBISA	. <i>Ntema.</i>
CHITONGA	. <i>Chipembere.</i>	SWAHILI	. <i>Kifaru.</i>

Longest horn known (anterior), 53½ inches. From Kenya Colony.

Average specimen of horn (anterior), 20 inches.

Height at shoulder, about 5½ feet.

Approximate weight (♂), about 2 ton.

The Black Rhino (few ever speak of it by its full name) is not so plentiful in Nyasaland as it is in Northern Rhodesia, and even in the latter country it is such a retiring animal in its habits that unless one gets into really wild country it is seldom seen. Its favourite

habitat is hilly country on the slopes of which is plenty of thorn bush, for it seems to like eating stuff that at first sight would seem not only to be highly indigestible, but most disagreeable as a nourishing food.



PLATE III.

RHINOCEROS (♂)
(Half life-size).

As this animal inhabits rocky country at times, the spoor is sometimes indistinct and is difficult to find. On sandy ground, however, it often shows clearly and is then easy to follow.

It drinks nightly, I believe, and must travel long distances to water, because it is often seen, when spoorred up, many miles from a river or water hole.

The natives seem to fear it more than they do the elephant, or any other game classed as dangerous, and when disturbed at close quarters the animal usually behaves in rather a fussy way and gives one the impression that he means to be nasty ; but I never found him particularly dangerous, and when classifying the dangerous animals I would put him last.

It has the strange habit of returning to the same spot to deposit its droppings, and after doing so it rakes them about with its feet and horns, and I imagine this trait may have caused the natives to consider it a bad-tempered animal.

My old friend, Major (then Captain) C. H. Stigand, was severely injured by one in 1905 ; and another acquaintance, Mr. D. D. Dobson, whom I knew at Fort Manning in Nyasaland in 1912, was killed by a black rhino near Ngara in 1916.

Dobson, like Stigand, was a very powerful fellow, and in his younger days had been a famous Rugby football player, but he seems to have been taken unawares by the animal and received a dangerous wound in the abdomen which caused his death within a few hours.

When disturbed he always runs up-wind, and in his efforts to get the wind to his liking he will often charge through a line of carriers, who seldom wait but throw down their loads and make for the nearest tree when there are any in the vicinity.

Rhino are much easier to kill than bull elephants, and I would put them on a par with cow elephants in their tenacity of life. They have to be hit right, naturally, but there is little difficulty in flooring a bull rhino with a .256 rifle if he gets the bullet low through the shoulders.

There are no white rhinos in the countries I write of, and the

main difference between the two species is that the white is larger in body and has longer horns, is square-lipped, instead of prehensile as in the black.

Why they were called white and black I do not know, for they are both the same colour, which is a slate gray.

The white (or Burchell's) is a grass feeder, so has certainly more sense than his congener, who delights in chewing thorns. I think the black rhino eats grass occasionally, for I am sure I have seen digested grass in their droppings.

The black rhino has very poor sight, and I doubt if he can see much more than 50 yards, and that is probably the main reason why he is inclined to be fussy and excited when come on by human beings. His hearing, too, is not very sharp, but he has an acute sense of smell, although I do not think he can scent danger nearly so far off as can elephants, buffaloes, and the antelopes.

This species used to be exceedingly plentiful in Kenya Colony, and there are instances told by travellers and hunters of up to twenty being seen in a day's march across the plains, and in scattered bush, and many incidents of the animals charging through the "Safari" are on record. More than three are seldom seen together, which will consist of a pair of adult animals and a young one.

Black rhinos are very fond of wallowing in mud, and their bellies are often covered with dried slime. Then they often use trees as rubbing posts, and a flat rock is sometimes found smoothed by the beasts scraping their abdomens back and forward along it.

I have seen big maggots in them, and these must cause the creatures much irritation, and they are often covered with big ticks. They must fight a good deal in the breeding season, as the bulls as

well as the cows are often scarred by long wounds. Their horns are sharp, and they have great power in their neck muscles.

The horns of rhinos are simply composed of solidified hair substance. Occasionally the posterior horn is found longer than the anterior one, and long ago this difference was the cause of dividing the animals into several varieties. I shot a rhino with a knob behind the two horns, and have heard of a few others with the same addition. A specimen is recorded with five distinct horns.

The tick birds sit on them and search for these vermin and the maggots they occasionally harbour, although when I have seen maggots they are usually in the belly of the animal and not on the back.

Owing to their solitary ways they should last for a long time in Northern Rhodesia, but on the plains in Kenya Colony I fancy this species may soon become a bush and forest dweller so as to escape persecution. On the plains he is easily seen, and easily shot when come on by chance.

In Northern Rhodesia he is really a sporting beast, for he has to be spoorred up to be found, and when come on in the bush is often at close quarters; so is a much more valued trophy to the man who has to travel in the heat a long way to find him than would be a specimen casually seen in the open and killed.

In Rowland Ward's *Records of Big Game*, there is a statement regarding a black rhino having weighed 2388 lb.

This beast must have belonged to the small race of black rhino found in Kenya Colony, for I am certain a large Northern Rhodesian bull would easily scale about twice as much, so the 2 ton I give is, I am sure, about correct.

HIPPOPOTAMUS

(Hippopotamus amphibius)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA .	<i>Mvuu.</i>	CHIBISA . .	<i>Mfuwu.</i>
CHIYAO . .	<i>Ndamondo.</i>	CHILALA . .	<i>Mfubu.</i>
CHINGONI .	<i>Imvu.</i>	CHIWEMBA .	<i>Mfubu.</i>
CHIKUNDA .	<i>Mvu.</i>	SWAHILI . .	<i>Chiboko</i> or <i>Boko.</i>

Good specimen of lower curved tusk (canine), 30 inches.

„ „ „ straight „ (incisor), 20 „

Approximate weight, about 2½ ton.

The Hippo, like the rhino, has a pre-historic look about him, but so have all the animals classed as pachyderms throughout the world.

These strange beasts were very plentiful in the countries I shot in, for they were found in most of the rivers and lakes of South Central Africa.

They exist in herds of from three or four to fifteen animals, and the bulls are much scarcer than the cows. Unless the males die in infancy I think there must be many less of that sex born. Possibly they get killed off in fighting, but if this is so their bodies are not seen, but then the crocodiles which usually inhabit the same waters would account for this.

I have shot many hippos in the Zambezi, Loangwa, Shire, Bua, and other rivers, and generally did so to supply the natives with meat, and to get the fat for myself, as, like elephant's fat, it is excellent when rendered down as dripping for cooking purposes.

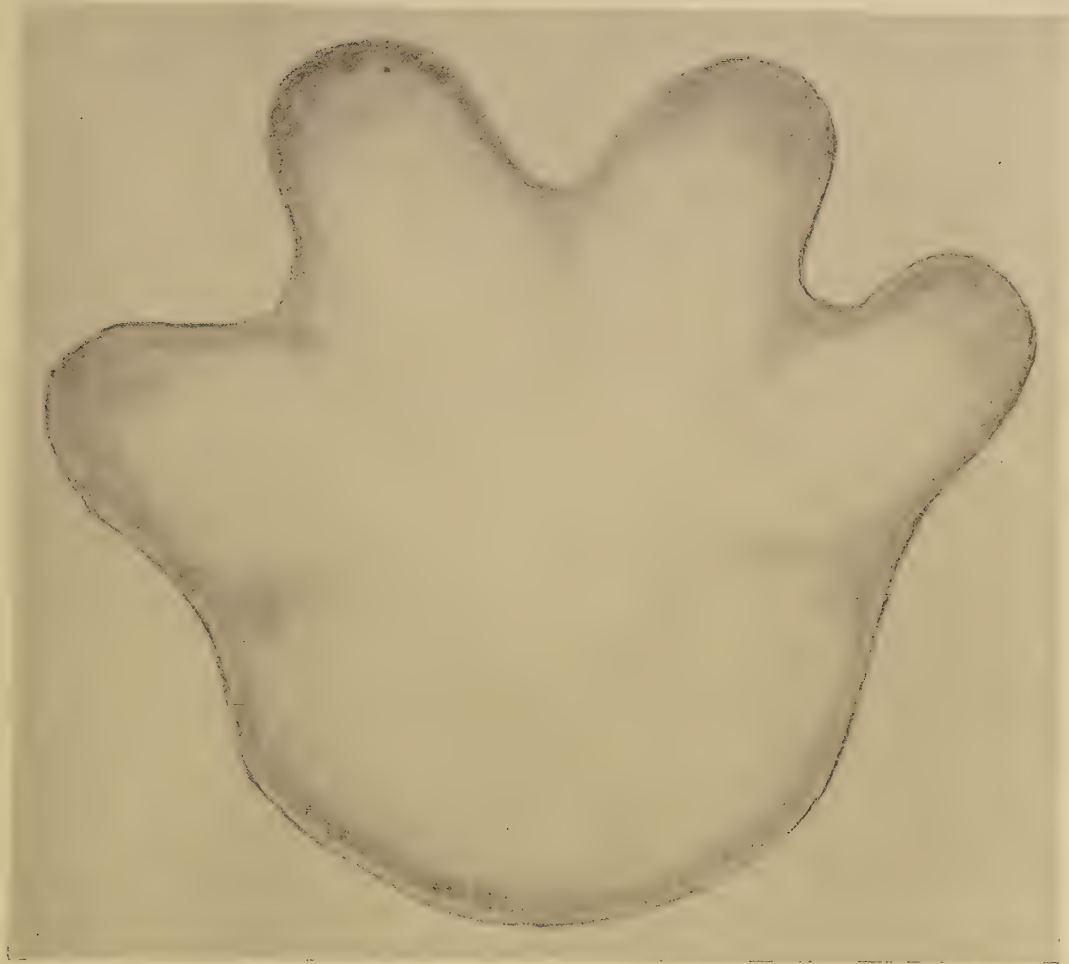


PLATE IV.

HIPPOPOTAMUS (♂)
(Half life-size).

In swampy ground and near rivers one often sees the most perfectly impressed tracks of hippos. As these animals in the daytime are usually in water there is not much opportunity in spooring them.

The fat, when removed from the body, should not be cleaned in water, but put in big earthenware native pots and boiled for several hours. I always got the native women to prepare it for me, and they let these vessels simmer, and keep scooping out the refuse until what is left is clean. Then when cool this is as white as snow, and makes a sweet lard for culinary use.

The back skin of an adult hippo is quite $1\frac{1}{2}$ inches thick, and it is cut into strips to make whips, called in various native languages *sjambok*, *chikoti*, *kiboko*, and so on. It is first cut into pieces about $1\frac{1}{2}$ inches wide and 4 to 6 feet in length, and these strips are usually hung up to the branches of a tree with a heavy stone attached to add weight. Then after a week or two it is taken down and worked round with small native adzes and knives. The South Africans often make very well-finished riding whips out of the hide, and being tough these give long service as riding whips.

Often at night when camped near a river or lake one will hear the sonorous grunts of hippos, and sometimes a bull giving a great roar.

In the Zambezi people used to fire at them from river steamers, and wound ten times more than they ever killed, and this is a shameful practice. These beasts suffering from painful injuries then avenge their hurts by attacking native dug-outs, sometimes even killing an occupant, or causing a death or more by drowning. A native deposited in the middle of a large river like the Zambezi running in flood would have little chance of getting ashore, as he would probably be taken by a crocodile, for these loathsome creatures teem in this and most other African rivers of any size.

Hippo ivory used to be in demand, and fetch fair prices, as

dentists formerly used it for making into artificial teeth, but now these are made from different compositions of harder material.

When the top canine tooth is broken, the lower one, which is kept worn down by friction on the upper, may then grow to an extraordinary length, and Ward, in his *Records*, mentions one measuring $64\frac{1}{2}$ inches on the curve, belonging to the late Sir F. J. Jackson, which came from Kenya Colony. This, of course, is a malformed tusk, and so likely are all canines which reach more than about 30 inches on the curve.

When a hippo is shot through the brain it sinks quietly to the bottom, and all one will notice in calm water are a few bubbles rise to the surface. If a beast makes a splash it is seldom killed, although I can remember one or two exceptions to this general rule.

It usually stays under for about two hours, but I have seen several in very hot weather rise in less than an hour.

If the beast has not fed much before being killed, and the water is cold, it may stay down for about five or six hours.

The buoyancy is due to gas forming in the stomach and intestines, and possibly when there is plenty of air in the lungs this may bring it up sooner.

The animals do great damage to the natives' crops when their villages and fields are near deep rivers or lakes, and I have particularly seen much of this along the great Loangwa River in North-Eastern Rhodesia.

One of the instances of a hippo which splashed after a brain shot, and died, occurred in this river.

Finding the natives practically starving, as they had finished most of their food, they begged me to shoot them some hippos,

so I had no hesitation in doing so, and as the beasts I had seen were nightly ravaging their new crops I resolved to kill my limit of six beasts. The herd consisted of about a dozen or so, and I found them in a deep pool near a group of villages.

I killed five animals with consecutive shots from a .303 Gibbs' rifle, and the sixth made a splash so I thought it was only wounded, and therefore fired at another, which was instantaneously killed I knew.

Then in a few hours, when the carcasses began to bob up and be hauled ashore by the ravenous natives, I was surprised to be told there were seven.

Once a Portuguese commandant at a fort on the Zambezi asked me to reduce a herd which had been upsetting native dug-outs, and I shot four in the same number of shots with a .303 Fraser falling block rifle. The Portuguese soldiers had been trying to kill them with old .577 black-powder Snider rifles, and only infuriated the beasts, as these soft bullets are practically useless for penetrating a hippo's hard skull.

It is important that only solid sheathed projectiles should always be used, for the hippo's skull is difficult to penetrate with soft-nosed bullets.

I liked the shot behind the ears when possible, but after the beasts have been alarmed the angle will probably be facing or half-facing. Then one has to judge more carefully.

Hippos when much molested get extremely wary, and will not expose themselves much in open water by daylight, and at such times will lie in the middle of reeds growing in deep water, where it is always impossible to see them, although one will often hear them coming up to breathe.

Once in the Bua River in Nyasaland I had a wonderful exemplification of the dualism connected with the brain of an animal and the way it affects the powers of direction and motion. I had hit a hippo in the head, and the bullet had done injury to the brain without penetrating it and killing the beast. It was in a large round pool, and it began to make a long circle of at least 60 yards in diameter at a great pace, coming to the surface, and then sinking and travelling for some yards underneath the water, leaving an undulating wave behind denoting its direction.

Seeing the poor animal was in pain, I did my best when its circle brought it opposite me to give it a final shot in the head, and although I struck it twice it was only the fifth shot which killed it. I was in rather a hurry to get on with my trip, but afterwards regretted I did not spare the time to examine the skull more carefully and find out exactly where the bullet went which caused these extraordinary contortions. A doctor afterwards told me I must have put one side of the brain out of action with my first shot, and only the uninjured side was in operation, which accounted for its strange movements ; and I expect he was correct.

*Notes on the Buffalo, Eland, Roan, Sable, Kudu, Waterbuck,
Hartebeest, Sassaby and Gnu*

THE BUFFALO

(Syncerus caffer)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA	. Njati.	CHIKUNDA	. Nyati.
CHIYAO . .	. Njati.	CHISENGA . .	. Njati.
CHINGONI . .	. Nyati.	CHIWEMBA . .	. Mboo.
CHIBISA . .	. Mboo.	SWAHILI (Nyasa)	Nyati.

Record horns (♂), 56½ inches widest spread from British East Africa.

Good specimens in Nyasaland and Northern Rhodesia, 38 inches.

Height at shoulder about 5 feet.

Approximate weight, 1500 lb.

SOME hunters, such as the late Sir F. J. Jackson and the late Mr. Judd, who had both a very large experience, thought these animals are the most dangerous game in Africa, but others of equal experience believe them to be less dangerous than elephants and lions. I agree with the latter, but think it is quite possible that in certain districts, and under given circumstances, buffaloes might be the worst.

For example, elephants and lions might be scarcer and much less hunted than buffaloes in some parts, and there might be a number of the animals wandering about suffering from one or more painful

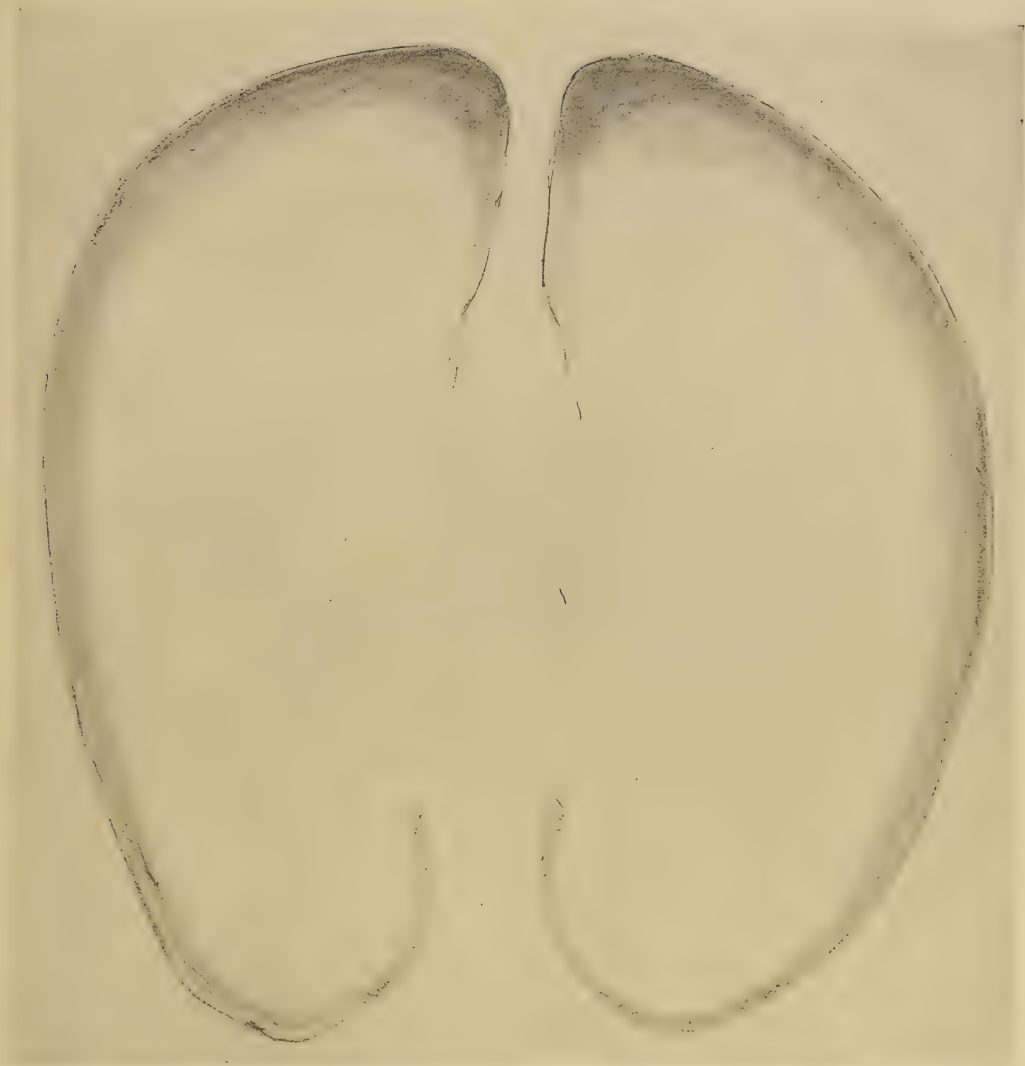


PLATE V.

BUFFALO (♂)
(Life-size).

The Buffalo, being a heavy animal, usually makes a well-defined spoor. It is easily identified as it is slightly larger than our domesticated cattle, whose tracks most people have seen at home.

98 *Notes on the Buffalo, Eland, Roan, Sable,*

wounds, and extremely liable to charge on the slightest provocation, or no provocation at all, for a buffalo under such circumstances is a most determined and pugnacious animal.

Buffaloes are most retiring creatures in their habits, and in their wanderings give human beings as far a berth as possible, although when not much molested they sometimes visit the natives' gardens to get the maize and millet stalks all game is so fond of eating. Being heavy beasts they can do a lot of harm in a short time, and like elephants and hippos they trample down and destroy much more than they eat.

An old bull loses most of his hair and is then a slate-gray colour, but the younger animals are a gray-black. The calves have reddish-brown hair, and probably begin to assume a blackish tint about their third year, or perhaps a little sooner.

They are most keen-scented animals, and excepting the elephant, I do not know any game which has to be hunted with more care regarding the wind.

Buffaloes prefer a mixture of bush and plain country, and usually retire to the shady places when the sun begins to get strong. There they lie and sleep until about four o'clock in the afternoon, when they begin to work towards the grassy dambos, and water, for they drink a lot and like wallowing in mud.

They can run much faster than one would imagine from their thick-set and bulky appearance, and it is remarkable the pace they can go through soft ground; and also the dense thorn cover they can break through when startled.

Like all herds when alarmed, they may run directly towards the hunter and his men. The best thing is to get out of sight, and when

they are near show oneself, when they will almost invariably split up and pass to either side. Inexperienced hunters often relate stories of being charged by herds of buffaloes (or elephants), which is pure nonsense, as the animals are simply trying to escape and nothing more. Of course if a rushing animal does get too close, it might make a lunge, thinking it was cornered, though even then I would not call this a *bona fide* charge with intent to do harm.

The rinderpest which ravaged from north to south in Africa about 1896 killed off hundreds of thousands of buffaloes, and great numbers of the other Ungulata; but they have recovered in a marvellous way, and to-day, I believe, buffaloes are extremely plentiful in Kenya Colony.

This being a most tenacious beast, the beginner should use a fairly heavy rifle, such as a .470, for a buffalo meaning business takes a considerable amount of stopping. The story-books which show pictures of him charging with his head dipped are incorrect, as he nearly always holds his nose straight out when advancing, so the brain shot is almost impossible, unless one can get the bullet up the nasal orifice, which I advise tyros not to attempt. The best spot is at the base of the throat, and solid bullets are best, as one needs ample penetration in such a solid-bodied animal.

A dying buffalo gives a long-drawn moaning bellow, which is a sad sound to hear, unless the animal in question has perhaps given one a lively time, when it will be welcomed as a sign that he will trouble no more.

When charging he often gives a few sharp grunts, but when being followed wounded he usually keeps quiet, though I have heard such an animal breathing hard; but he had a lung wound, which was probably the reason.

There are tales told of buffaloes when being followed wounded describing a circle, so as to ambush the hunters coming behind. This is most unlikely, and the reason these stories originated is easily discovered by any one who knows what a wounded beast does. Being in pain and doubt as he is preparing to lie down, he wanders all around and may come back on his tracks when doing so and then suddenly decide to rest. The hunter following on the spoor may then come on him suddenly and possibly be charged. On hearing an enemy he will get up, and stand at right angles to his tracks; and as he is an extremely quick beast in action he will appear like a flash, and will need to be floored or jinked. If there are trees about one has a much better chance, for he often comes at such a pace, and is so heavy an animal, that a jump behind a sapling may save one if not taken too soon, for then the animal might have time to change his course.

It is always best, however, to shoot hard in the first instance; for running away generally incites an animal to come on, although a wounded bull buffalo is often so pugnacious that he probably needs no encouragement to act on the offensive. No real sportsman has any animosity against a beast for trying to avenge its injuries, for the pluckier the quarry is the greater the satisfaction in killing it.

Buffalo are found in herds from only a few animals to several hundreds, where they are common and unmolested. Sometimes a few bulls will be found consorting together, and these are nearly always pretty old animals.

Lions kill a good number of them, but prefer the cows and calves to the big-horned bulls, which can put up a good fight against a single lion.

Kudu, Waterbuck, Hartebeest, Sassa, & Gnu 101

I have mentioned how acute is the scent of buffaloes, and their senses of sight and hearing are also keen with regard to the younger animals. The aged bulls sometimes, however, get very dull of hearing, and their sight very bad indeed, and it is possible with the wind right to get very close to them.

The natives respect the buffalo for his pluck and strength, and should they confer the name of *njati* or *nyati* on a person, the synonym is one of honour. The scientific name of this animal has recently been changed from *Bos caffer* to *Syncerus caffer*, I do not know why, and probably no one else does. The former cognomen seems the more descriptive in every sense.

THE ELAND (ZAMBEZI RACE)

(*Taurotragus oryx livingstonei*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA	. Nchevu.	CHIKUNDA	. Ntuka.
CHINGONI	. Mpofu.	CHIWEMBA	. Nsefu.
CHITONGA.	. Sefu.	SWAHILI .	. Mpofu.
CHIBISA .	. Nsefu.	CHINGURU .	. Ndoda.
CHIYAO .	. Mbunju.		

Record horns (♂), 37 inches, straight. North-West Rhodesia (Zambezi Race).

Good specimen, 28 inches, straight.

Height at shoulder (♂), 6 feet.

Approximate weight (♂), 1600 lb.

The largest of the African antelopes, and one of the most in-offensive animals. His meat is excellent, and quite the best of all the larger buck.

There is a great contrast between the weight of the bulls and



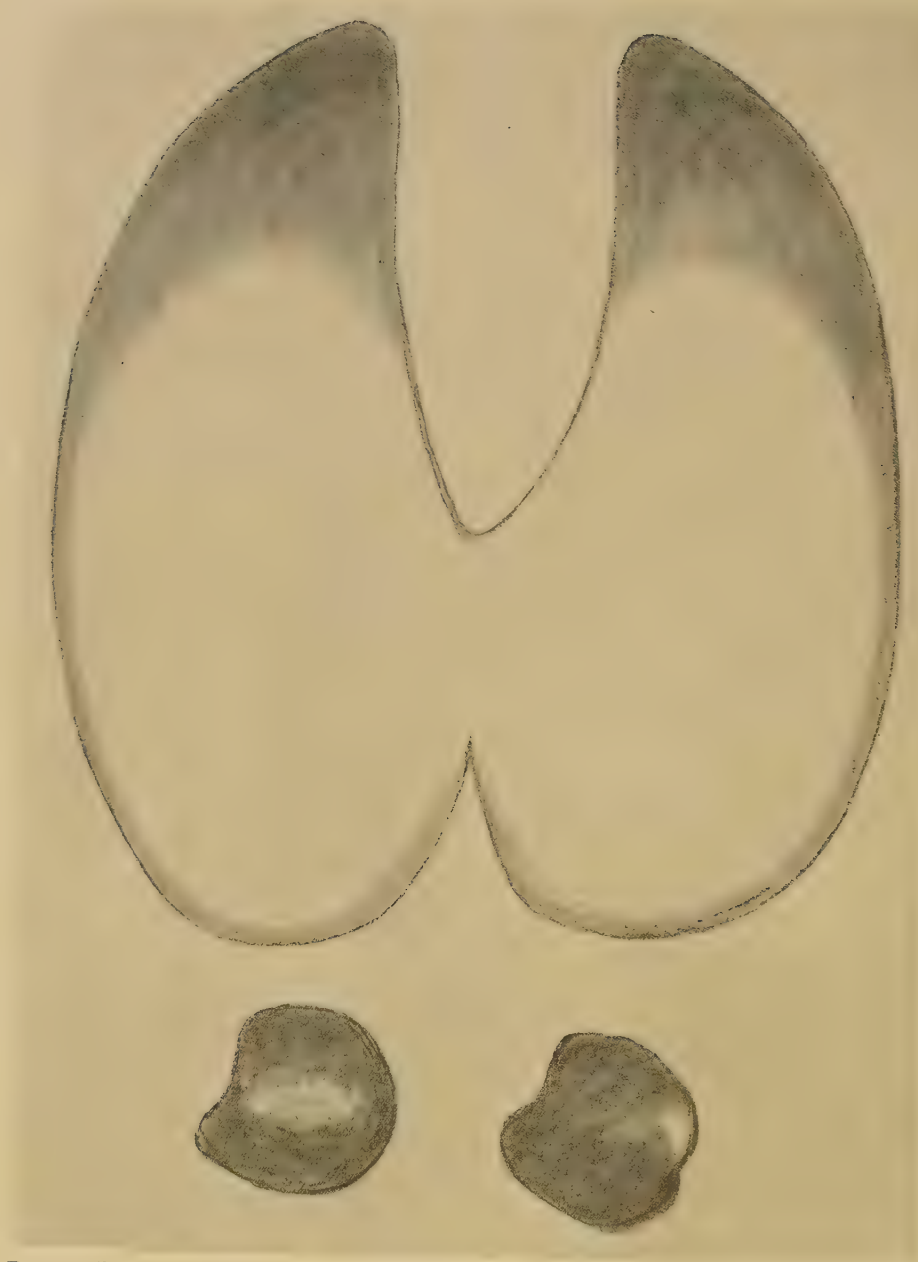


PLATE VI.

ELAND (♂)
(Life-size).

Considering that he is by far the heaviest beast of the antelopes I have found, he often leaves a faint spoor on hard ground. When, however, he gets on soft earth his tracks are as deep as those of buffaloes.

the cows, and I am certain I have killed males exceeding the weight I mention, but I happened to live in a place in Nyasaland where the elands grew to a larger size than I have seen them anywhere else.



PLATE VII.

BONGO SPOOR.

This animal does not exist in Nyasaland or Northern Rhodesia, as its habitat is West Africa, Uganda, and Kenya. I give a spoor as a guide to any one who may visit those regions.

(Drawn from a rough sketch once sent me by the late Major C. H. Stigand.)

The old animals, like buffaloes, get almost hairless in time, and then their coloration is a slate-blue. The tint of the younger animals is a reddish-yellow, tawny on the back and neck.

Near Fort Manning, in Nyasaland, in 1912, I shot several very fine bulls, one of which was the heaviest and most hairy of any I

ever saw. His picture appears in my *Wild Life in Central Africa*, opposite p. 35. He had very thick chocolate-coloured hair on his neck, a great pad of it down his nasal bone, and a big tuft of long hair on his forehead, and was apparently in his prime. All the natives who saw him and helped to carry his meat to camp said they had never seen such a massive eland, and neither have I, and I have seen thousands of the animals.

Various races are known, some being striped, as in the race here mentioned, and others without these marks. Some have a white chevron on the face, but I can only remember shooting one cow with such a mark, and it was faint.

The usual size of herd consists of a dozen beasts or so, but I have seen herds of several hundred, doubtless the amalgamation of a number of small troops.

Bulls wear their horns down more than the females, and the latter often grow much longer horns than the males. Like all the antelopes, particularly the roan and sable, the eland seems to rub his horns often on trees, as they always have bark on them.

The eland browses much, but is also a grass feeder, and I have often admired a herd feeding in a glade in the evening. In browsing he is the most destructive of the antelopes and pulls down branches of some size.

There is a remarkable difference between the size of his fore and hind feet, the former being much the larger, and he leaves big marks in soft ground being so weighty.

In walking he presses more on the front part of his hoofs than do buffalo, who give a more even or flat pressure.

Elands often invade native gardens, and do quite a lot of damage,

not only by eating much, but by trampling down three times what they consume.

The eland is the only one of all the African antelopes which might be used as a domestic animal, for he is gentle and easily tamed, and his meat is excellent compared to many of the others, which are tough and stringy.

I once saw a pair of cow eland horns which were long, and noticed the usual spiral at the base was almost completely absent. I may say there is no difficulty in this species of telling the male from the female in the bush, as the male is much larger in the body, with thicker and shorter horns. When one finds a place where elands have been lying down they leave a sweet aromatic smell behind, and this is sometimes a clue to their proximity. Buffaloes and other game also do this.

THE ROAN ANTELOPE

(*Hippotragus equinus typicus*)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA	<i>Chilembe.</i>	CHINGONI	<i>Nturakamwa.</i>
CHIYAO	<i>Mlembwe.</i>	CHIBISA	<i>Mpelembe.</i>
CHIKUNDA	<i>Ntunwakamwa.</i>	CHIWEMBA	<i>Perembe.</i>

Record horns (♂), $34\frac{1}{2}$ inches curve, from Southern Rhodesia.

Good specimen (♂), 27 " " " "

Height at shoulder, about 4 ft. 9 in.

Approximate weight (♂), about 650 lb.

Apparently this animal was named from its colour, which may be a red or blue roan, and this coloration varies considerably in different localities, though one or the other mainly predominates.

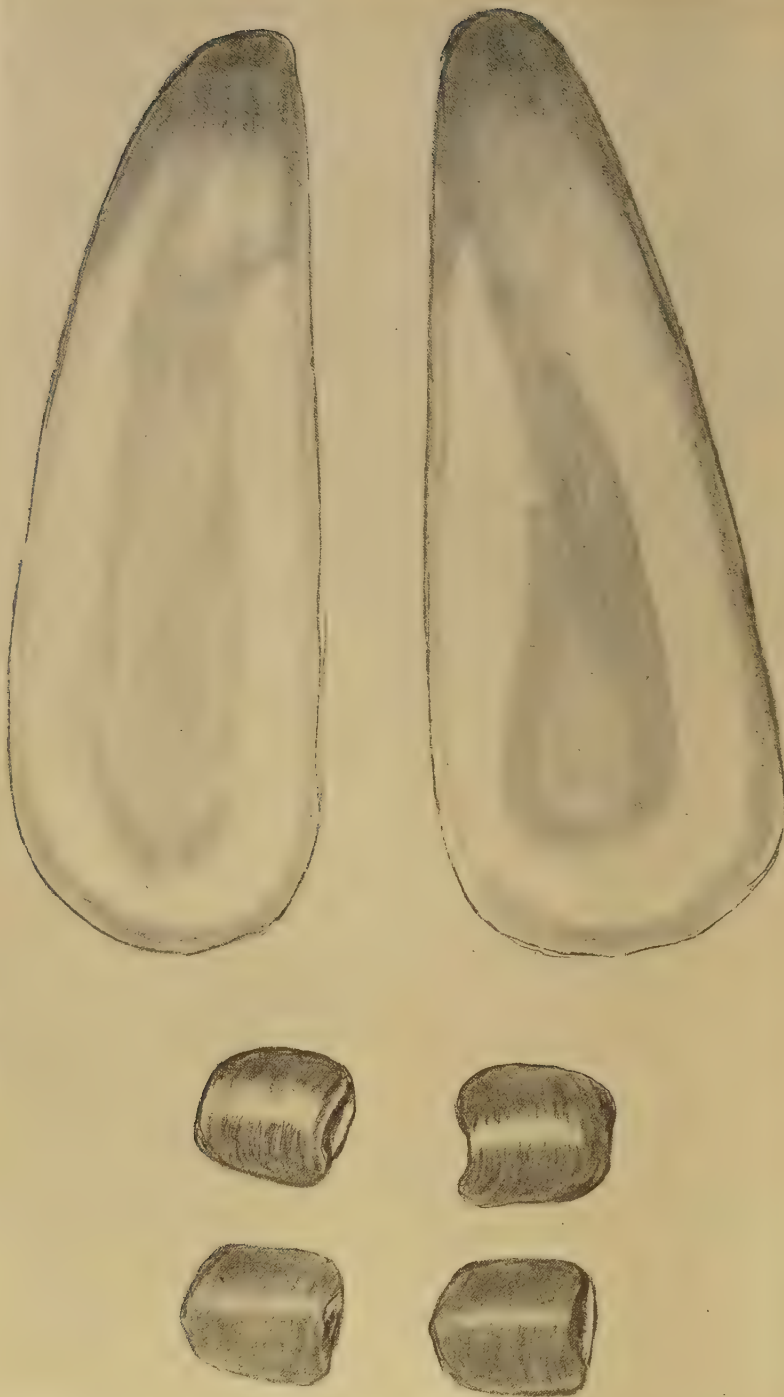


PLATE VIII.

ROAN ANTELOPE (♂)
(Life-size).

This animal leaves a good impression, as he treads hard and is a heavy beast.

In the same herd I have seen animals marked in both shades, and I think the blue (or grayish) tint is usually found on the oldest animals. Certainly most of the younger beasts are a strawberry or reddish colour, so the variation may be due to age.

They go about in herds of from ten to thirty beasts, and were exceedingly common in the parts of Nyasaland and North-Eastern Rhodesia I hunted in, particularly so in the latter country.

Roan antelopes have very large ears, and they can hear well in bush, and their senses of smell and sight are also very good. Their meat is fair when it does not come from an old bull. They are plucky beasts, like their congener, the sable antelope, so I advise the young sportsman not to approach too closely either of these beasts when sitting wounded. Although it is not perhaps an absolutely infallible rule, I found when a roan, or a sable antelope was stretched flat on its side, it was either dead, or *in extremis*, but if sitting it would be able to jump up, or act in the offensive when in that position by sweeping its head round.

All antelopes have very strong necks, so they can give a most powerful lunge with their sharp horns.

Old roan bulls are less inclined to lead a solitary existence than are male sable, so far as I have noticed.

I have heard on several occasions bull roan antelopes grunt with rage when followed closely, and amongst themselves they fight a lot.

A remarkable feature about the older beasts is that they seem to wear down one horn more than the other, and this, I think, is caused by their using their horns to dig up plants or roots. Not one out of ten beasts when fully adult has a symmetrically shaped

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 pair of horns. The race I here write of has been classed as *H. Equinus typicus* to distinguish it from those of the Sudan and other places, but I believe there is a very slight variation between them all. Although the roan is a fine animal, his head as a trophy bears no comparison in size and length to that of the sable antelope, the animal I shall next describe.

THE SABLE ANTELOPE

(*Hippotragus niger*)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	+	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA .	<i>Mpala-Pala.</i>		CHIKUNDA .	<i>Kangombe-Ngombe</i>
CHIYAO .	<i>Balapi.</i>		SWAHILI .	<i>Balape.</i>
CHINGONI .	<i>Nyambuzi.</i>		CHIWEMBA .	<i>Nkanshiria.</i>
CHITONGA .	<i>Mpala-Pala.</i>		CHIBISA .	<i>Nkwalandi.</i>

Record horns (♂), 52½ inches curve from North-West Rhodesia.

Good specimen (♂), 42 „ „ „ „

Height at shoulder, 4½ feet.

Approximate weight, 500 lb.

A sable bull is a most beautiful animal when seen feeding in the open with the sun shining on his black and white coat, and glancing on his finely curved pair of long horns. Some people would give him first place, while others would favour the kudu and gemsbuck; and it is really difficult to compare them, for they are all beautiful, and certainly amongst the finest animals in the world. The sable is a bolder beast than the kudu, and is oftener found in the dambos, or grassy glades, which occur all over the country; but he sometimes goes to the high ground for coolness, and to

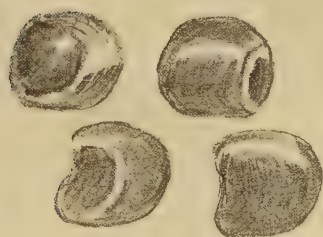
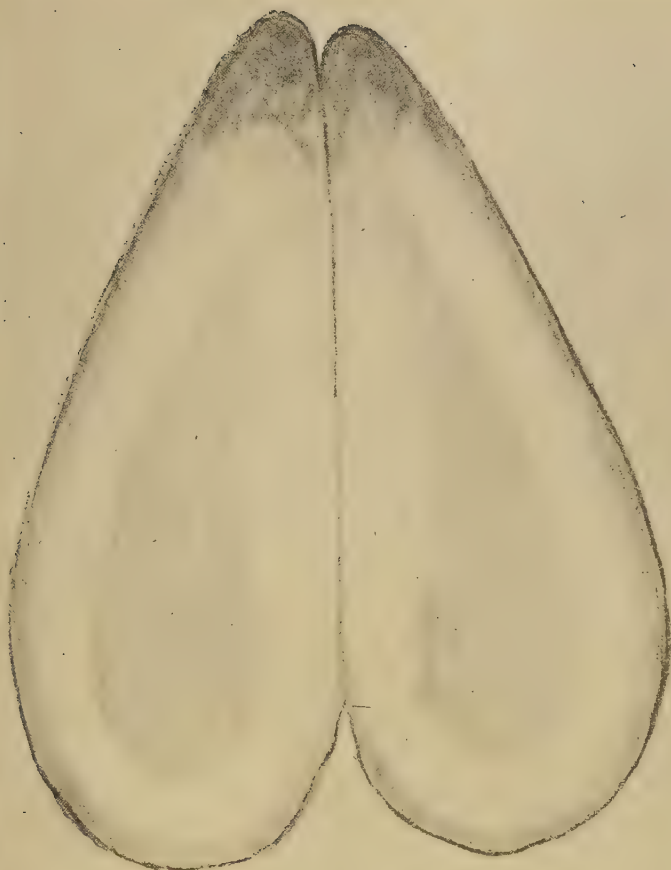


PLATE IX.

SABLE ANTELOPE (♂).

The Sable makes very distinct tracks, and when running the hoofs splay more than those of any other antelope (*see* illustration of spoor to follow).

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get rid of the flies which trouble all mammals in the lower country in the hot weather. There are no gemsbuck in the countries I write about, so comparison here is impossible, and I shall come to the kudu later on.



PLATE X.

SABLE BULL RUNNING.

The forepart of hoof cuts deep into soft soil and scatters the earth behind.

Having shot many sable antelopes, and often had opportunities of studying their habits, I always admired these animals greatly, and think them the finest antelopes to hunt in South Central Africa.

Kudu, Waterbuck, Hartebeest, Sable, & Gnu III

They run in herds of from ten to forty beasts, consisting of males, females, and young. The latter begin life with coats of a rufous red shade, and about their third year begin to get blackish.

One will find them feeding in the open early in the morning, but as the sun gets strong they wander into the bush. In using the word "bush" this may also mean thin forest, where, however, the trees are usually fairly scattered, often leaving shady glades in places. In South Central Africa there are few really heavy forests where the trees grow so thickly that plenty of light does not get through to the ground below.

There are two other varieties of sable in Africa, one being an East African race which has been named *H. niger roosevelti*, which is said to be paler in colour than the typical one, but the other—the Angolan sable, *H. niger variani*, is by far the finest of the three. This variety grows immense horns, the record being a pair of 64 inches on the curve, belonging to that fine sportsman and writer, Mr. J. G. Millais.

Mr. H. F. Varian once kindly presented me with a head measuring $58\frac{1}{2}$ inches on the curve, and one of my regrets is that I never had a chance of shooting such a fine trophy myself. I once wounded and lost in North-Eastern Rhodesia an animal having horns closely approaching 50 inches, I believe, which was the largest-horned beast I have seen in the flesh.

I do not think sable bulls fight so much with one another as do roan antelope males. I have heard a wounded one grunt loudly when closely approached in thick bush, but on the other hand have almost stepped on a wounded bull when following it into thick grass, when it jumped up and bolted, to be dropped by a raking

shot. There is no saying exactly what any animal will likely do under given circumstances.

I have seen zebras and hartebeests mixed up in a herd of either roan or sable antelopes, but never saw the two latter species intermingle, although on more than one occasion I have seen a herd of each feeding in close proximity. As a matter of fact, when sable antelopes are particularly numerous, it has been my experience that there are not so many roan antelopes, and *vice versa*.

Sable antelopes have keen scenting, seeing, and hearing powers, especially solitary bulls which are often found running alone. In thick bush they are difficult to see when standing still under the shade of the trees, and all one will hear is a series of grunts, and the thuds of the feet of the bolting animal if the ground is hard. Sometimes they disappear quietly on becoming aware of danger. A sable in running hard makes a deeply cut broad spoor with each foot as the two halves open more than do those of most of the larger antelopes when travelling fast.

Their spoor is not unlike that of Lichtenstein's Hartebeest, but more rounded at the tips, and the waterbuck's tracks are also like sable's, but considerably smaller, and no good hunter could mistake them.

Sable antelopes are still fairly abundant in the parts of Africa I mention, and I hope they will survive for a long time, as they are magnificent creatures.

KUDU

(*Strepsiceros strepsiceros*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA	. Ngoma.	CHILALA	. Shambolola.
CHIYAO	. Ndandala.	CHIBISA	. Mpurupura.
CHIKUNDA	. Nzilowa.	CHIWEMBA	. Kaloko.
CHINGONI	. Lichangaroro.	CHITONGA	. Nigoma.
CHISENGA	. Mpurupuru.	SWAHILI	. Mama.

Record horns, 64 inches on curve. British Museum (F. C. Selous).

Good specimen, 55 inches on curve.

Height at shoulder, about 5 feet.

Approximate weight, (♂) 500 lb.

This animal is the Greater Kudu, and a smaller congener, which inhabits North-Eastern Africa and Somaliland, is the Lesser Kudu. The latter animal is non-existent in the countries I write of.

The kudu is a grayish-blue colour, has long hair on the throat, and has about ten white stripes. Its ears are large and broad, and these doubtless are useful to it as a safeguard in hearing its natural enemies in the thick bush which it usually inhabits.

Kudus are very retiring in their habits, and do not seem inclined to show themselves much in the open, and they resemble in this respect the Bushbuck, one of the prettiest of the medium-sized antelopes.

They like hilly country covered by scrubby bush and are much more numerous in Nyasaland and North-Eastern Rhodesia than many people suppose. The place I have seen most is along both sides of the Rukusi River in the latter mentioned territory, and there

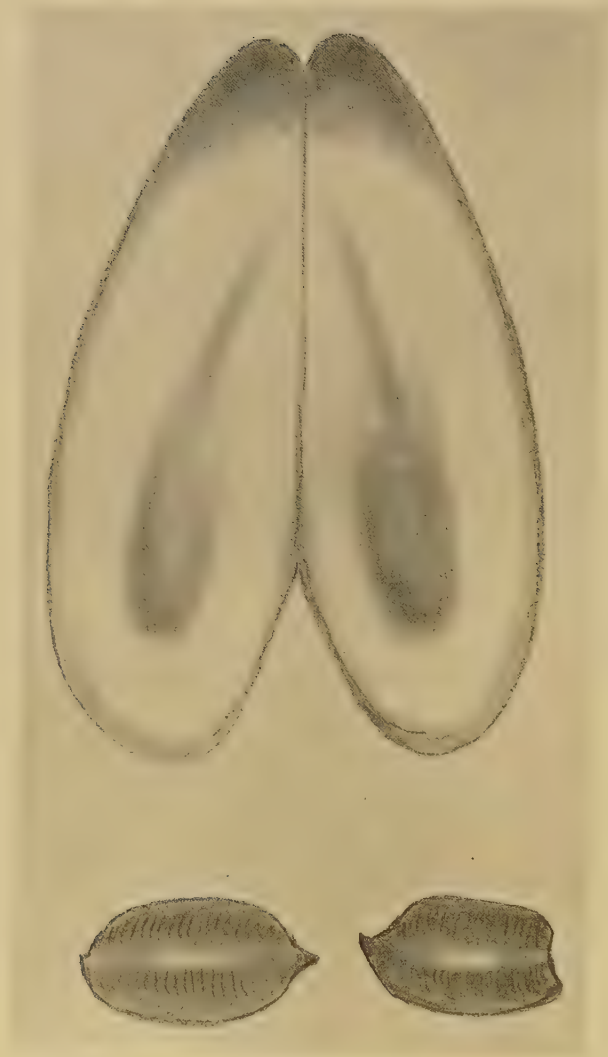


PLATE XI. KUDU (♂)
(Life-size).

The Kudu has the neatest track of all the antelopes and treads more lightly than other buck of about the same weight.

they are very abundant. Here the country is undulating and the bush fairly thick with the usual intervening dambos.

A kudu's head on the wall looks finer than a sable antelope's, as it can be better viewed from the front. A well-horned bull standing amongst the rocks on some rough hillside in Africa is one of the finest sights it is possible to see of wild game in its natural haunts.

This animal browses on different leaves, but also eats grass; and I have seen wild aloe plants nibbled by them, apparently for the moisture they contain.

I have heard of two pairs of Kudu horns being found interlocked, like those occasionally found of the red deer of Scotland, so the bulls must sometimes fight hard. Kudu cows are hornless, and are much smaller in the body than the males. Excepting the difference in size between bull and cow elands, I do not know of any other species where the size is so marked as between the two sexes of the kudu.

Kudus are easy to kill with small-bore rifles, and are not nearly so tenacious of life as are sable and roan antelopes, waterbuck, and hartebeests amongst the larger antelopes.

A good many kudus are killed by lions, and leopards often slay the fawns, as these animals both inhabit the same type of country.

Many bull kudu have horns measuring about 45 inches between the tips, and it is marvellous how clever they are in getting through timber that grows closely. If they think they will be held they cant their heads to one side or the other so as to clear. Only once have I seen a bull get jammed, but after a few seconds of severe struggle he got free and then continued his retreat.

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The record head given from Ward's *Records* is 64 inches, but there is a pair of horns in South Africa shot by and belonging to Mr. J. Cole Rous, which measure $71\frac{1}{2}$ inches on the curve. I believe this magnificent creature was shot with a .220 Savage high-power rifle, and the owner was certainly in luck when he got such a grand trophy with such an inadequate weapon for such game. Nothing could be better, however, for killing a kudu than a .256 or .275 H.V. rifle, and I have shot a good many with these and other weapons of about the same size.

Mr. Rowland Ward, in his most useful book, mentions a female kudu head, the horn measurement being 37 inches on the curve, which is an exceptional instance of a cow bearing horns of any size.

I once saw an extraordinary elongated hoof of a kudu as it had grown out in a curve of about a foot in length. This, of course, was a malformation, which must have impeded the beast greatly in its movements.

Only the bulls should be killed, though I found on the few occasions I got a cow that their meat was much superior to that of the males. Nowadays it behoves people to shoot with more moderation, as game is getting scarcer all over the world, but the people who got into country where game was abundant in the older days had no reason to imagine that settlements would so soon come, and they were therefore less bound to be careful than is essential to-day when moderation is the only thing which will preserve the fauna and tend to its survival.

THE COMMON WATERBUCK

(*Kobus ellipsiprymnus*)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA .	<i>Nakodzwe.</i>	CHIYAO .	<i>Ndogolo.</i>
CHINGONI .	<i>Chuzu.</i>	CHIKUNDA .	<i>Vilimbo.</i>
CHITONGA .	<i>Chusu.</i>	CHIWEMBA .	<i>Chuswe.</i>
CHIBISA .	<i>Chuswe.</i>	CHISENGA .	<i>Chuzu.</i>
CHICHEWA .	<i>Chuzu.</i>	SWAHILI .	<i>Koru</i> (different species).

Record horns (♂), 36½ inches on front curve. From Transvaal.

Good specimen (♂), 28 inches on front curve.

Height of shoulder, about 4½ feet.

Approximate weight, 475 lb.

This variety has a white, or yellowish, ring round the rump, which gives it its scientific name.

As its name denotes, it is fond of inhabiting swampy ground, though it is often found in hilly country, but seldom more than six miles from the nearest water.

Only the males bear horns, and they are beautifully shaped animals, with a much better carriage than most of the other antelopes. Their bodies do not droop so much behind as some of the others, and they often have long hair on the neck, which adds to their appearance. Their colour is a rusty brown, although some are an iron-gray, and their hair is fairly long on the body.

They are amongst the toughest buck in Africa, but all the Kob family are noted not only for their capability of standing severe wounds but also for the fibrous nature of their flesh. When I have shot a waterbuck I have usually given the meat to my followers,

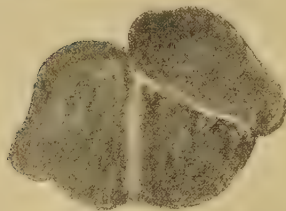
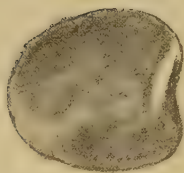
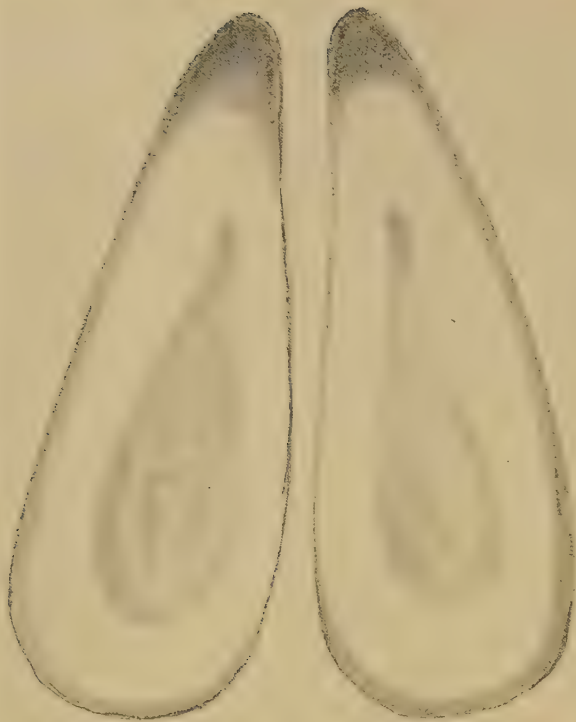


PLATE XII.

WATERBUCK (♂)
(Life-size).

(Droppings—dry weather type).

This is the kind found in the dry season. The droppings in the rainy season resemble those of cattle in lesser quantity.

as even after it was well hammered it took more chewing than I liked.

They are usually found in herds of about a dozen animals, and I never saw a troop consisting of more than twenty-five, but on a good many occasions I have seen several herds feeding in open swampy ground in close proximity, though they each kept separate as they moved along.

I remember seeing a wounded bull run into a pool in the Loangwa River, and his strength or courage failing him, he stood looking back at us.

With his noble carriage and gray shaggy throat he looked very fine amongst the lovely tropical scenery and I much regretted I had no camera with me to get his picture.

In the dry hot season the waterbuck's droppings are usually hard, but in the rainy season they are often soft, like buffalo or cow dung.

On one occasion when following a wounded bull waterbuck into thick grass, I nearly trod on him. He reared up with his forelegs almost over my head, and I hit him full in the chest and finished him. I think he was more startled than pugnacious, although if he did mean to attack, the poor beast had not time, as my rifle was ready and I fired immediately he rose on his hind legs.

There are several varieties of waterbuck in Africa, including one in Northern Rhodesia, classified as *K. defassa crawshayi*. None of these varieties have the whitish ring round the buttocks or rump.

Lions kill a good many waterbuck, and I believe they are often taken by crocodiles when drinking. I have seen several marks along the banks of the Loangwa River where I think such a tragedy had taken place, and the natives have told me of such incidents.

LICHTENSTEIN'S HARTEBEEST

(Alcelaphus lichtensteini)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA .	<i>Ngondo.</i>	CHINGONI .	<i>Nkbonse.</i>
CHIYAO .	<i>Ngose.</i>	CHIBISA .	<i>Nkonse.</i>
CHIKUNDA .	<i>Ngondo.</i>	CHIWEMBA .	<i>Nkonsi or Nkon-</i> <i>kotela.</i>
CHITONGA .	<i>Nkbose</i>	SWAHILI .	<i>Kongoni</i> (this is another species, Coke's harte- beest).
CHISENGA .	<i>Nkonse</i>		

Record horns, $22\frac{1}{2}$ inches on front curve. Barotsiland (N.-W. Rhodesia).

Good specimen, 20 inches on front curve.

Height at shoulder, 4 ft. 3 in.

Approximate weight, 380 lb.

There are fourteen species of hartebeests in Africa, and they are all rather awkward-looking beasts, but with regard to the variety mentioned above I must say that his flesh is about the best of the larger antelopes with the exception of that of the eland, which is preferable.

Their colour is a tawny red, shading to yellowish on the sides, and I have noticed that when the sun was shining full on them that they looked lighter than when it was behind them.

Hartebeests are most gregarious in their habits, and I have seen them mixed with roan and sable antelopes, zebras, waterbuck, and wildebeests.

As a rule they are easy to shoot, and behave stupidly when they have not been much molested by humans, but after they have suffered much persecution the survivors of a herd can become most wary in their habits.

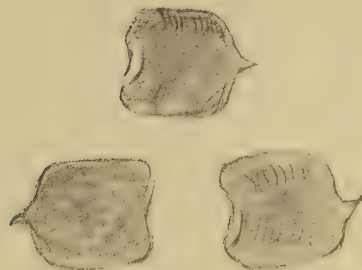
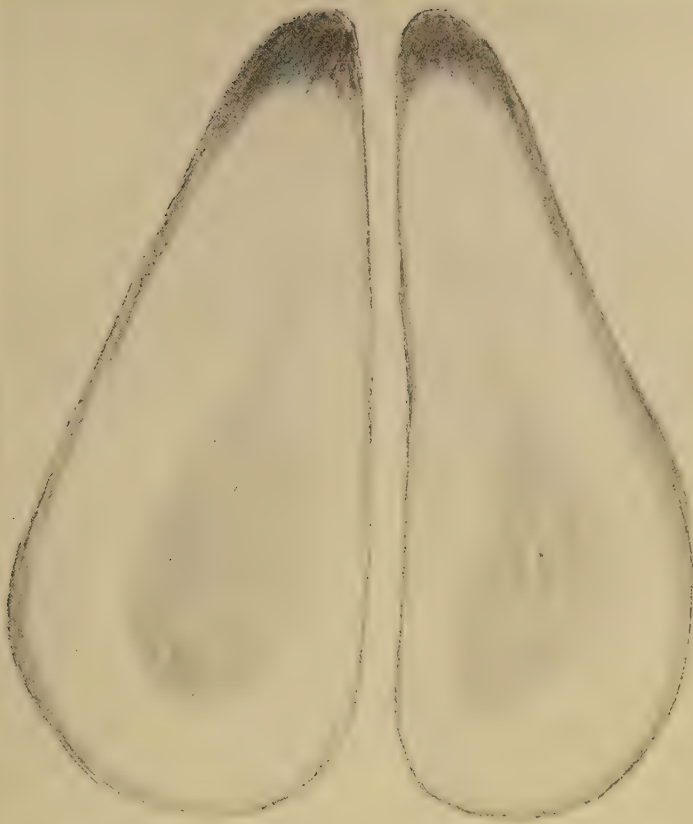


PLATE XIII. LICHTENSTEIN HARTEBEEST (♂)
(Life-size).

This buck has a large spoor for his height and size, and is not hard to track, as a rule, for he often inhabits country which is sandy.

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Both sexes bear horns, and at a distance it may be difficult in a bad light to distinguish an adult female from a male, but the latter



PLATE XIV. LICHTENSTEIN HARTEBEEST (♂)
(Life-size).

Often there is less than above from which to identify the footprint left behind,
but it is enough for an experienced tracker.

are slightly larger, and their horns at the base much thicker. Many of the hartebeests have a high horn-pedicle, but that of the animal I write of is short. Only the species named *Lichtensteini* inhabits Nyasaland and Northern Rhodesia.

Of all the larger antelopes hartebeests were the most abundant in the countries I have shot in, and they are so typically African in form that it will be a pity when they become scarce.

They retire to the shade when the sun gets very warm, and return to the dambos and glades about four o'clock in the afternoon. I believe they drink daily, and a good many fall a prey to lions when they are at their drinking places.

Hartebeest when hit well forward with a small bore rifle are easy enough to kill, but when badly struck may go on for miles, as they are tenacious of life.

Amongst green bush they are not difficult to see unless there are anthills about, when I have mistaken one for the other on several occasions. Like all game they cannot keep their tails still for long, and the wag of a caudal appendage, or the flick of an ear, often shows one the game when out after meat.

This animal was the antelope the novice usually tried his 'prentice hand on as they were so numerous. As advice to the beginner I would advise that he always tries to hit this beast well forward, which will save many of the creatures the pain of going off with a bad injury. In my experience the hartebeest is less quickly disabled with a bullet in the abdominal parts than any other of the larger antelopes.

SASSABY

(Damaliscus lunatus)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHIBISA . . .	<i>Mtengo.</i>	CHIWEMBA . . .	<i>Mtengo-Maroli.</i>

Record horns, $17\frac{1}{2}$ inches on curve. North-East Rhodesia.

Good specimen, 16 inches on curve.

Height at shoulders, about 4 feet.

Approximate weight, about 350 lb.

This animal is also called the Bastard Hartebeest, and its name used often to be spelt *Tsessebe*.

It is extremely localised, and inhabits the plains bordering Lake Bangweolo in great numbers, and I have heard of herds numbering quite a thousand animals.

In North-Eastern Rhodesia it grows better horns than it does farther south. Both sexes grow horns, but those of the female are thinner than the male's.

Like all the hartebeests the sassaby is a tough animal, being very tenacious of life.

When they were hunted on horseback south of the Zambezi, they were said to run with more endurance than any of the other antelopes. Owing, however, to the prevalence of tsetse flies, horses are not used in the countries I deal with.

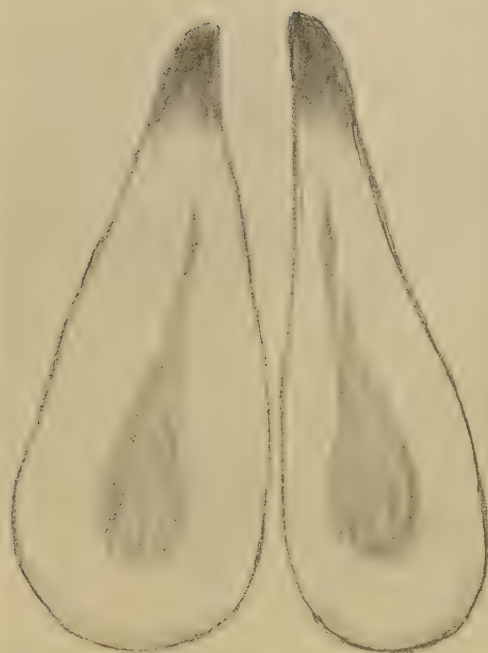


PLATE XV. SASSABY (♂)
 (Life-size).

THE BRINDLED GNU, OR BLUE WILDEBEEST

(Connochaetes taurinus)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA .	<i>Sindi.</i>	CHIBISA .	<i>Nyumbu.</i>
CHIYAO .	<i>Zindi.</i>	CHICHEWA .	<i>Nyumbu.</i>
CHINGONI .	<i>Nkonkoni.</i>	SWAHILI .	<i>Sindi.</i>
CHIKUNDA .	<i>Nyumba.</i>		

Record horns (♂), 32½ inches widest spread. From Portuguese E. Africa.

Good specimen (♂), 28 inches widest spread.

Height at shoulder, 4 ft. 4 in.

Approximate weight, 500 lb.

These animals are fairly large and heavy. I have not found them very common in the parts of North-Eastern Rhodesia I have been in, but have seen a few in Nyasaland and the bordering territory of Portuguese East Africa, where they are abundant round Lake Chiuta. These and the Nyasaland variety have a white chevron on the nasal bone. They go about in herds and are very gregarious in their habits towards other species, for I have seen a bull wildebeest with a herd of zebra, sable antelopes, and also with herds of hartebeest.

They are a brindled bluish-brown colour, and like roan antelopes seem to vary slightly in different localities. The wildebeest is a hard beast, and very tenacious of life when not hit properly.

In appearance they are not such wild-looking creatures as were the black wildebeest of Southern Africa, which had a long white tail.

When I was living in Cape Town about 1902, after having seen some service in the Boer War, there was a black wildebeest

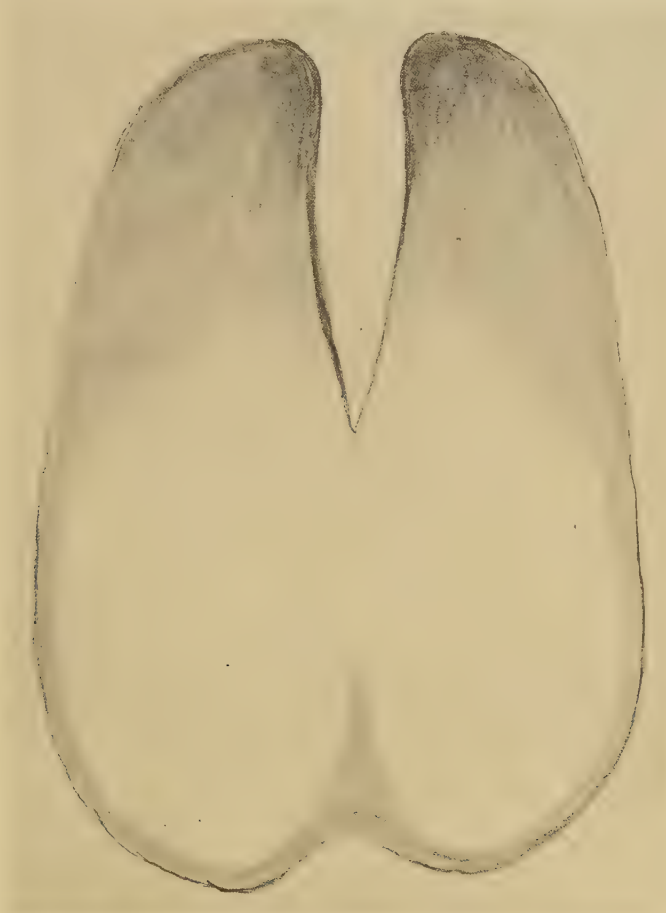


PLATE XVI. . . BLUE WILDEBEEST (GNU) (♂)
(Life-size).

The Nyasa race has a white chevron on its face, which the Northern Rhodesian variety lacks.
This animal is usually called the Brindled Gnu.

in Mr. Rhodes' park at Groote Schure at Rondebosch, outside Cape Town. A friend and myself were taking a short cut through the place one day, and this animal soon had us

through the fence. I heard afterwards he had caught a native Cape boy and killed him, so he was apparently an animal with a fighting spirit!

In my next chapter I shall write about the medium-sized and smaller antelopes.

Notes on the Situtunga, Nyala, Lechwe, Puku, Bushbuck, Reedbuck, Impala, Oribi, Klipspringer, Duiker, and Sharpe's Steinbuck

SITUTUNGA

(*Limnotragus spekei*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHIBISA . .	Nzowe.	CHIWEMBA . .	Nsowe.

Record horns (♂), 35 inches on front curve, from the Sudan.

Good specimen, 27 inches on front curve.

Height at shoulder, about 4 feet.

Approximate weight, 250 lb.

THIS rare antelope spends much of its life in water, or very swampy ground, and is difficult to find, and the most likely chance of getting a shot is to hire a dug-out and work quietly round their haunts early in the morning or late in the evening. The hoofs are much elongated in form, and spread widely, which enables the animal to walk over reeds, bogs, and soft muddy ground.

In North-Eastern Rhodesia their habitat is Lake Bangweolo, and also two small lakes named Moir and Young. The females are hornless and much smaller than the males. Situtunga are much hunted in dug-outs by the natives living in their locality during the rainy season. They have drives and spear

the animals as they swim across lagoons or waterways in the swamps.

NYALA

(*Tragelaphus angasi*)

NATIVE NAME

CHIYAO . . . Boo (pronounced "bow" long).

Record horns (δ), $31\frac{1}{2}$ inches on front curve, from Zululand.

Good specimen, 27 inches on front curve.

Height at shoulder, $3\frac{1}{2}$ feet.

Approximate weight, 225 lb.

This animal's name is sometimes spelt Inyala. Without exception, it is the most beautiful medium-sized antelope in Africa.

In Nyasaland it occurs on the Muanza River, and is by no means abundant. Here it inhabits thick scrubby bush bordering the river, so it is difficult to get a shot at. The best way to get a specimen would be to find their tracks and wait for a shot in the cool of evening. It would be almost hopeless attempting to walk them up, as they are so wary and keen of hearing that they would hardly ever offer a chance. The points of the horns are white-tipped like occasional specimens of the kudu's horns. The females are hornless and should never be shot.

PLATE XVII.

SITUTUNGA (♂).

As this creature inhabits swampy ground it has to splay the hoofs greatly for support and progression.

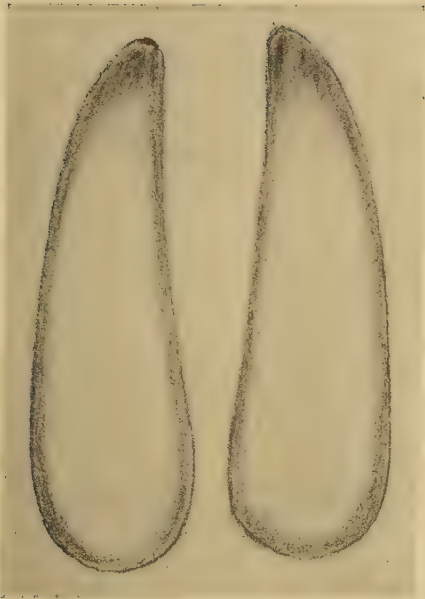


PLATE XVIII.

LECHWE (♂).

Does not have such elongated hoofs as the Situtunga, and although it likes swampy ground it is not so amphibious in its habits as the former species.

LECHWE (TWO VARIETIES)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHIBISA . .	Nja.	CHIWEMBA . .	Nja.

THE RED VARIETY (*Onotragus leche*).

Record horns (δ), $34\frac{7}{8}$ inches on front curve, from North-West Rhodesia.

Good specimen, 29 inches on front curve.

Height at shoulder, 3 ft. 4 in.

Approximate weight, 160 lb.

THE BLACK VARIETY (*Onotragus smithemani*).

Record horns (δ), $29\frac{3}{8}$ inches on front curve. North-East Rhodesia.

Good specimen, 23 inches on front curve.

The common, or red lechwe, is also found south of the Zambezi River, and is fairly plentiful in certain country which is of a swampy nature. In Rowland Ward's *Records of Big Game* he mentions one head from Nyasaland, but I fancy it must have been an imported specimen, as I never heard of the animal's existence in that country. It inhabits North-Western Rhodesia, and is fairly common there I believe.

The black lechwe is found round Lake Bangweolo, and the adult males have beautiful blackish-brown coats. Although not such a water-loving animal as the situtunga, the lechwe is often found in muddy swamps and in shallow water. Both species inhabit rather unhealthy country where the malarial mosquitoes are abundant and irritating. Like the kobus family these animals are hard to kill when not hit correctly. The females of both varieties are hornless.

PUKU

(*Adenota vardoni*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA	. <i>Seuli.</i>	CHIBISA	. <i>Seula.</i>
CHIYAO	. <i>Seula.</i>	CHIWEMBA	. <i>Nseula.</i>
CHINGONI	. <i>Seuli.</i>	CHISENGA	. <i>Seula.</i>

Record horns (δ), $20\frac{3}{4}$ inches on front curve, from North-East Rhodesia.

Good specimen, 18 inches on front curve.

Height at shoulder, 3 ft. 3 in.

Approximate weight, 225 lb.

Occurs in Nyasaland, but is localised. Very abundant in North-Eastern Rhodesia. Usually found near water and is plentiful in the country bordering the Loangwa River. Large herds are seen, and the males fight a good deal. The puku is a cobby, strongly-made animal, and well proportioned. It is tenacious of life, and can carry off severe wounds unless hit properly.

The females are hornless, and out of the breeding season the males sometimes consort together and then seem to agree better. A herd of puku feeding on the flats bordering an African river is a beautiful sight, and one it is not usually necessary to interrupt unless one wants a good head, for their meat is very tough and stringy.

I have found the puku easier to get within range of than any of the medium-sized antelopes, but this depends on how much they have been molested recently. This animal's scientific name used to be *Kobus vardoni*.

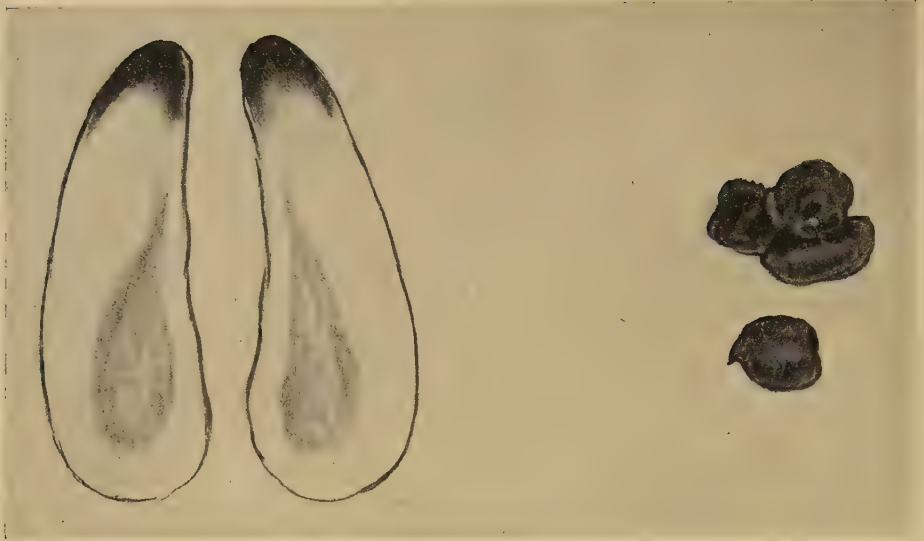


PLATE XIX.

PUKU (♂)
(Life-size).

Makes a rounded track, as the tips of the hoofs are blunter than those of Reedbuck and Impala. Although the Puku is a heavier and larger animal than the Reedbuck, its droppings are slightly smaller.



PLATE XX.

PUKU RAM

Dotted line shows place to cut for taking the mask or headskin.

BUSHBUCK

(*Tragelaphus scriptus*)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA	. <i>Balala.</i>	CHITONGA.	. <i>Mbawa.</i>
CHIYAO .	. <i>Mbawala.</i>	CHISENGA	. <i>Chuwawala.</i>
CHINGONI	. <i>Mbawala.</i>	CHIBISA .	. <i>Chikwiwa.</i>
CHIKUNDA	. <i>Gobo.</i>	CHIWEMBA	. <i>Chisongo.</i>

Record horns (♂), $21\frac{3}{4}$ inches on curve, from Nyasaland.

Good specimen, 15 inches on curve.

Height at shoulder, 2 ft. 9 in.

Approximate weight, about 150 lb.

This is the prettiest medium-sized buck I know in the countries I write of, and one of the wariest when he has been much hunted. He inhabits thick bush in the day-time, but feeds out to open patches in the evening, and is found in similar country early in the morning if one is up early enough to catch him there before he retires to thick cover. Only the males bear horns, so females should not be killed. However, when hunting bushbuck in dense bush it is very difficult sometimes to see the head, and as shots have to be taken quickly the mistake of shooting a female sometimes occurs. The males are darker in colour and much larger than the females.

This species has a wide range, and besides being found near most rivers goes high into hilly country. I have shot several on the plateaux of the Zomba and Mlanje mountains in Nyasaland, and in the coolness of these heights the sport reminded one of deer-stalking in the Highlands of Scotland.

136 *Notes on the Situtunga, Nyala, Lechwe, Puku,*

The males bark at night, and I think they do this when alarmed by the approach of a leopard, which cat is plentiful in the country the bushbuck inhabits and must kill a large number of them, particularly the fawns. The flesh is good eating, except (as with all game) in the rutting season, when it is tainted rather strongly.



PLATE XXI.

BUSHBUCK
(Life-size).

This buck seems to put a forward pressure when walking, as often only the tips of the spoor are visible. Difficult to track in the heavy bush. Droppings: although this is the usual shape, I have sometimes found the pellets separated on the ground.

Bushbuck skins, being prettily marked and coloured, are one of the few African skins suitable for using as rugs. They are tough and durable, whereas the skins of impala and reedbuck are thin and flimsy. The hides of the larger antelopes are too thick and stiff to make good mats unless they are thinned down considerably before being mounted. Like all the other *Tragelaphus* the bushbuck is mainly a browsing animal, although I have seen them nibbling grass occasionally.

REEDBUCK

(*Redunca arundinum*)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA	. Mpoyo.	CHITONGA.	. Mpoyo.
CHIYAO .	. Ndope.	CHIBISA .	. Mvwe.
CHIKUNDA	. Mpoyo.	CHIWEMBA	. Mfwe.
CHINGONI	. Nshlangu.		

Record horns (♂), 17 inches on front curve, from North-Western Rhodesia.

Good specimen, 14 inches on front curve.

Height at shoulder, 3 feet.

Approximate weight, about 150 lb.

This buck is well named, as it is found in reeds and grass-lands bordering rivers and lakes. It is found in couples, or small companies up to five or six animals, and is abundant all over the country where the terrain suits it.

When disturbed it gives a shrill cry which is apt to put other game on the qui vive, so the sight of reedbuck is not always welcome when one is after more valuable game. The meat is fairly palatable, but rather insipid and tasteless, although the kidneys and liver are good eating. Its skin is very thin and, when dry, is like brittle parchment. It makes a nice mat to have alongside one's camp-bed as the hair is soft, and I always carried a reedbuck skin with me for this purpose as it weighs very little; but they do not last long owing to their extreme thinness. The females are hornless and considerably smaller than the males. They should not be shot, though in heavy reeds or grass it is often very difficult

138 *Notes on the Situtunga, Nyala, Lechwe, Puku,*
to distinguish the sexes. Reedbuck, after first bolting, often stand
to look back before they are quite out of range. They are easier



PLATE XXII.

REEDBUCK
(Life-size).

As this buck is usually found near swamps and rivers one often sees perfect tracks on hard mud. The tracks are very neat and sharp-pointed. Droppings: are not unlike Puku droppings, but the spoors of the two animals are quite different.

to kill than almost any of the other antelopes I have met, and in this respect bear no comparison to the puku, and even the small common duiker, which is wonderfully tenacious of life.

IMPALA, OR PALA

(*Æpyceros melampus*)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA	. <i>Nswala.</i>	CHITONGA	. <i>Swala.</i>
CHIYAO	. <i>Swala.</i>	CHIBISA	. <i>Mpala.</i>
CHIKUNDA	. <i>Mpala.</i>	CHIWEMBA	. <i>Mpala.</i>
CHINGONI	. <i>Nswala.</i>	CHISENGA	. <i>Mpala.</i>

Record horns (♂), 27½ inches on front curve, from South Africa.

Good specimen, 21 inches on front curve.

Height at shoulder, 3 feet.

Approximate weight, 120 lb.

This animal is plentiful in Nyasaland and North Eastern Rhodesia, particularly on the borders of large rivers from which they seldom wander far. The sight of impala and puku almost invariably indicate that water will be found in the vicinity. The East African race found in Kenya Colony is heavier, and grows much larger horns, as long as 31½ inches on the curve, and I should imagine weighs about 150 lb.

Only the males grow horns, and they are considerably bigger than the females and usually slightly darker coloured.

I know no prettier sight in the African bush than to see a herd of these beautiful creatures feeding in a glade with the sunlight glancing on their chestnut-coloured coats, showing up against the dark-green foliage of the surrounding trees.

There are often several males in a herd, which may consist of from ten to a hundred animals. When going to and coming from

140 *Notes on the Situtunga, Nyala, Lechwe, Puku,*
water they often walk on a narrow front, and leave a very distinct
aggregation of tracks in the sandy or muddy soil.

Out of the breeding season the males often leave the females
and consort together, and I have occasionally seen herds of males
consisting of about fifty animals.

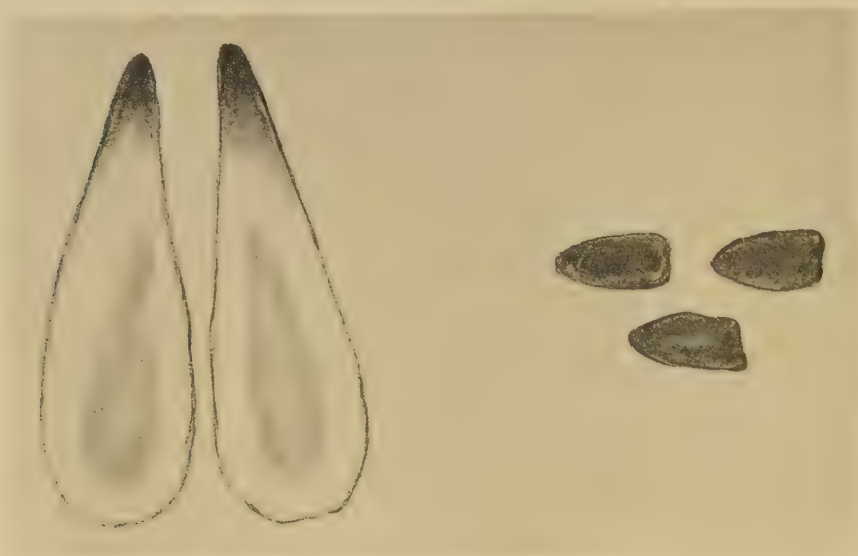


PLATE XXIII.

IMPALA (♂)
(Life-size).

As this antelope inhabits the sandy ground near rivers and lakes and consorts in large herds, the tracks are often noticed in great numbers. Droppings: longer and thinner in shape than those of the Reedbuck, which is often found in the same locality.

In fairly wild country, wherever the huge bulbous baobabs and mopani trees grow, impala are usually found feeding or resting amongst the park-like scenery, such as is found bordering the Loangwa River in North-Eastern Rhodesia, for this type of country is their favourite haunt.

I remember many an evening stroll with my rifle, when I was living at Mzazas on that river, on which I would go quietly to

Bushbuck, Reedbuck, Impala, Oribi, &c. 141

some glade in the bush where I had seen some good-horned buck feeding with his harem of females. If his head did not appear on closer inspection to be as good as I had thought, and if the meat problem was not too pressing at the time, I have spent an hour watching the beautiful creatures, and returned with a clean rifle.

When startled, impala often jump into the air and give a kind of bark as they rush away. If not shot at on these occasions one can often get up to them again after giving them a rest to settle down, for they are not so easily scared as are many of the antelopes.

The carnivora commit much damage to the herds of impala, especially just after the fawns are born, and I have often come on a place where a leopard has had a kill. Wild dogs, which work havoc amongst them, should be shot whenever seen, as they are most destructive pests.

ORIBI

(*Ourebia ourebi*)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA	. <i>Choe.</i>	CHINGONI	. <i>Chozimbi.</i>
CHIYAO	. <i>Chikosimbi.</i>	CHIBISA	. <i>Kakonje.</i>
CHIKUNDA	. <i>Dambalachepa.</i>	CHIWEMBA	. <i>Nsele.</i>
		CHISENGA	. <i>Chowzimbi.</i>

Record horns (δ), $7\frac{3}{8}$ inches on straight, from Angola.

Good specimen, 5 inches on straight.

Height at shoulder, about 25 inches.

Approximate weight, about 45 lb.

The oribi is usually found in couples, and likes thin bush on the verge of dambos, where it feeds in the cool of morning and

142 *Notes on the Situtunga, Nyala, Lechwe, Puku,*
evening, and even all day when the weather is not very hot. As
they are small-bodied buck they are difficult targets, unless close.
They should not be shot at at much over one hundred yards.

The females are hornless, but it is extremely difficult to distinguish the sexes at any distance. When running away the male usually goes first. Oribi meat is tender, though insipid; but, like



PLATE XXIV.

ORIBI (♂)
(Life-size).

This small buck makes a very dainty spoor and inhabits country where the ground is often sandy and impressionable. The track resembles that of a miniature Hartbeest. In running (right) it seems to take much longer strides than the Duiker. Oribi dung is longer and thinner than that of the Duiker.

reedbuck, their kidneys and liver are good eating, and, naturally, have in the tropics to be used quite fresh.

Their colour is very similar to the impala, though perhaps slightly lighter in tint. They are fast on their legs and often stand to gaze backwards after starting off. If they have been much shot at they go straight away without stopping again before they are out of range.

As they inhabit country where there are usually plenty of ant-hills, they are interesting little buck to stalk with a small bore rifle, and I remember many a pleasant evening hunting them in North-

Bushbuck, Reedbuck, Impala, Oribi, &c. 143

Eastern Rhodesia. Although not very large, to carry one a mile or two on one's back is quite a load in the heat, as I remember well, especially when one has also a rifle to bring along.

KLIPSPRINGER

(*Oreotragus oreotragus*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA ¹	. <i>Chinkoma.</i>	CHINGONI	. <i>Ligogogo.</i>
CHIYAO	. <i>Chivalama.</i>	CHISENGA	. <i>Mbalali.</i>
CHIKUNDA	. <i>Mbalawi.</i>	CHICHEWA	. <i>Chinkomo.</i>
		CHIWEMBA	. <i>Chibusi-Mabwe.</i>

Record horns (♂), $5\frac{1\frac{3}{8}}{18}$ inches, from North-Eastern Rhodesia.

Good specimen, 4 inches.

Height at shoulder, about 22 inches.

Approximate weight, about 40 lb.

This is a very sporting little buck, as its pursuit takes one high into the hills. Single rocky kopjes in the bush may sometimes hold a couple of these sprightly antelopes, and if, on climbing such places, none are found one will at least obtain entrancing views over vast expanses of game-haunted bush.

Only the males bear horns, so there is no necessity to shoot the females. They usually go in couples, though I have often seen up to half-a-dozen together. Their outstanding characteristic is their wiry-hair coats. When they are shedding their hair I have often seen a cloud of it dispersed after an expanding bullet had gone through one. The Boers in South Africa called him the klipbok,

¹ In the former "Spor" book "Gwapi" is an error. Above is correct.

144 *Notes on the Situtunga, Nvala, Lechwe, Puku,*
meaning "stone-buck," from his favourite habitat. His hoofs are
beautifully constructed for his movements on rough ground, as
they are very small, enabling progress to be made on his toes as
he jumps from rock to rock.

Their meat is the best I know of all the small buck, and re-



PLATE XXV.

KLIPSPRINGER (♂)
(Life-size).

The Klipspringer walks on the tips of his hoofs and, inhabiting rocky hills and kopjes, is a
most difficult animal to track

minded me more of Scotch black-faced mutton than any I have
tasted in Africa.

I have shot them on the plateau of Zomba and Mlanje mountains
in Nyasaland; and on many a range, or kopje, in North-Eastern
Rhodesia, where they are usually numerous.

They seem to obtain all the water they need from the dew which
settles on their food, and do not appear to bother about drinking
daily, as do most of the other antelopes.

COMMON DUIKER

(*Cephalophus grimmi*)

(NATIVE NAMES)

Language.	Native Name.	Language.	Native Name.
CHINYANJA	. <i>Gwapi.</i>	CHIBISA	. <i>Insba.</i>
CHIYAO	. <i>Isia.</i>	CHIWEMBA	. <i>Pombo.</i>
CHIKUNDA.	. <i>Nyasa.</i>	CHISENGA	. <i>Nisba.</i>
CHINGONI	. <i>Phunzi.</i>	SWAHILI	. <i>Dodoro</i> (another species).
CHITONGA	. <i>Tungwa.</i>		

Record horns (δ), $6\frac{3}{8}$ inches, from the Transvaal.

Good specimen, 5 inches.

Height at shoulder, about 25 inches.

Approximate weight, 35 lb.

The only two species of duiker I have come across in Nyasaland, North-Eastern Rhodesia, and adjacent territories are the common duiker and the blue duiker.

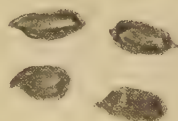


PLATE XXVI.

COMMON DUIKER (δ)
(Life-size).

This buck, considering he is small, is not hard to track on fairly soft ground. It is seldom, however, that the hunter bothers to track the tiny antelopes, as they are usually walked-up.

The red duiker was mentioned in *Central African Game and its Spoor*, but I am now doubtful whether it exists in above countries, although it is known in the Mozambique province. Therefore, I

146 *Notes on the Situtunga, Nyala, Lechwe, Puku,*
shall not trouble with it further. There are about twenty varieties of duiker known throughout Africa, and the common duiker, called often duikerbok, is very plentiful all over the country I have hunted in.

Only the males grow horns, and the females are usually hornless, although I have heard of several instances of them bearing small horns.

These animals inhabit bush and grass country, and are often found feeding in the open glades and dambos in the cool of morning and evening.

After running off they usually stop and look back to see what has frightened them, so thus give one a chance of a quick shot.

In grass they have the habit of driving through the cover, which is the cause of their name, for the word "duiker" means in Dutch "diver."

Their most noticeable characteristic is their toughness and tenacity of life, for they will go off sometimes with wounds which one would imagine would instantly paralyse them and forbid all further movement.

They have a habit of returning to the same spot, usually a sandy open space in the bush, to deposit their droppings, and the natives, knowing this, set spring snares made from a bent-over bough to catch them.

The males have a tuft of long hair between their horns which, when seen close, resembles a third horn.

They are extremely plentiful in some parts of the country, and the natives have drives with men and dogs, and catch them in long nets spread across openings in the bush and trees. One or two

Bushbuck, Reedbuck, Impala, Oribi, &c. '147

men take cover behind trees, rocks, or ant-hills, and when a duiker gets entangled rush in and spear it. One day when out hunting I came on such a scene and saw one duiker killed. They also kill them by running them down with their dogs, and generally get their animal by throwing a knobkerry at its legs and then spearing it before it can recover and escape.

The yellow-backed duiker exists in parts of Northern Rhodesia, bordering the Congo Free State, but is rare in this part of Africa. It is more commonly found in Congo territory. Its scientific name is *Cephalophus coxi*, and it is the largest species of duiker known. Its height at the shoulder is about 34 inches.

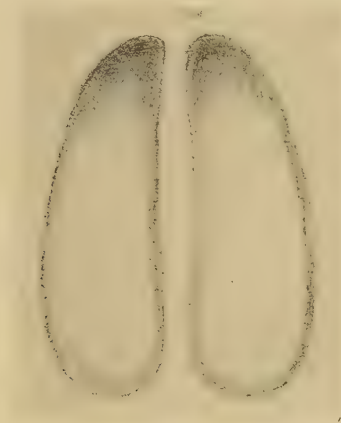


PLATE XXVII. YELLOW-BACKED DUIKER (♂)
(Life-size).

This animal is rare in Northern Rhodesia, and is more plentiful in Congo Territory and other parts of West Africa.

BLUE DUIKER

(*Cephalophus monticola*)

Language.	Native Name.
CHINYANJA	Kadumba.

Record horns (♂), $2\frac{3}{16}$ inches, from Nyasaland.

Good specimen, $1\frac{1}{2}$ inches.

Weight (♂), about 14 lb.

Both sexes bear horns. Fond of very thick bush and forest country, and is found in Mlanje district, Nyasaland. When running

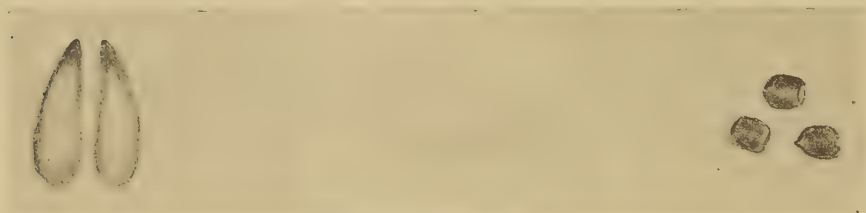


PLATE XXVIII.

BLUE DUIKER (♂)
(Life-size).

The smallest antelope in Nyasaland. As it inhabits very thick bush and forest it cannot be spooed, and is usually come on by chance. The droppings are often deposited in the same spot, and the natives, knowing this, set snares around such localities to trap them.

away seldom stands again to look back like most of the smaller antelopes. The natives trap a number, as these animals are fond of using runs and tunnels in the bush when moving about. Many people prefer to shoot this and other small buck with a shot-gun, which I do not think so sporting as trying for them with a rifle.

LIVINGSTONE'S ANTELOPE

(*Nesotragus livingstonianus*)

Record horns, $4\frac{3}{8}$ inches. Portuguese East Africa.

Good specimen, 3 inches.

This antelope does not exist in Northern Rhodesia so far as I know, but I possess two pairs of horns from animals shot in the Mikolongwe district, near Blantyre, in Nyasaland. The first horns I got I sent to Mr. R. Lydekker, F.R.S., of the Natural History Museum, London, and he replied that I was correct in thinking they were from a Livingstone's antelope. They are said to be very rare, even in the district where they were got, so it is unlikely many exist there.

SHARPE'S STEINBUCK

(*Rbaphiceros sharpei*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA	. Kansenye.	CHISENGA	. Kafundu.
CHIKUNDA	. Kambangu.	CHIBISA	. Katili.
CHINGONI	. Nsumpe.	CHIWEMBA	. Katiri.

Record horns (δ), $2\frac{3}{16}$ inches, from Nyasaland.

Good specimen, $1\frac{1}{2}$ inches.

Weight (δ), about 20 lb.

These small antelopes are usually very wary and difficult to shoot with a rifle, though I have managed to get several with that weapon.

They often lie up in thick grass, and bolt like rabbits, so are

150 *Notes on the Situtunga, Nyala, Lechwe, &c.*

difficult to hit with a single bullet although easily shot with a scatter-gun. They are also found in thin bush country.



PLATE XXIX. SHARPE'S STEINBUCK (♂)
(Life-size).

This animal, being small, is hard to spoor, unless he is on sandy soil.

Only the males grow horns. Their coats are reddish with whitish hairs intermingled. They are not very common, but where they exist, one may see half-a-dozen in a long day's walk.

The Carnivora

LION

(Felis leo)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA .	<i>Mkango.</i>	CHIBISA .	<i>Nkalamu.</i>
CHIYAO .	<i>Lisimba.</i>	CHILALA .	<i>Nkalamu.</i>
CHIKUNDA .	<i>Mpondoro.</i>	CHISENGA .	<i>Nkalamu.</i>
CHINGONI .	<i>Ngwenyama.</i>	CHIWEMBA .	<i>Nkalamu.</i>
CHITONGA .	<i>Khalamu.</i>	SWAHILI .	<i>Simba.</i>

Good length of skin (♂) (unstretched), 9 feet.

Weight (♂), about 450 lb.

Height at shoulder (♂), about 3 ft. 7 in.

SO much has been written about the habits of lions by writers such as Selous, Stevenson-Hamilton, Pease, Percival, and others, that it would be quite unnecessary to attempt a further recital of their well-known characteristics, except to say that they are animals that should be treated with due respect, which they usually are by anyone who knows anything about them.

It is a mistake to wander about at night in a lion country without a lamp, and they are particularly dangerous in dark rainy nights ; the season they usually suffer most from hunger as the game has scattered owing to the prevalence of water and feed. In the day-time they almost invariably retire before the presence of man.

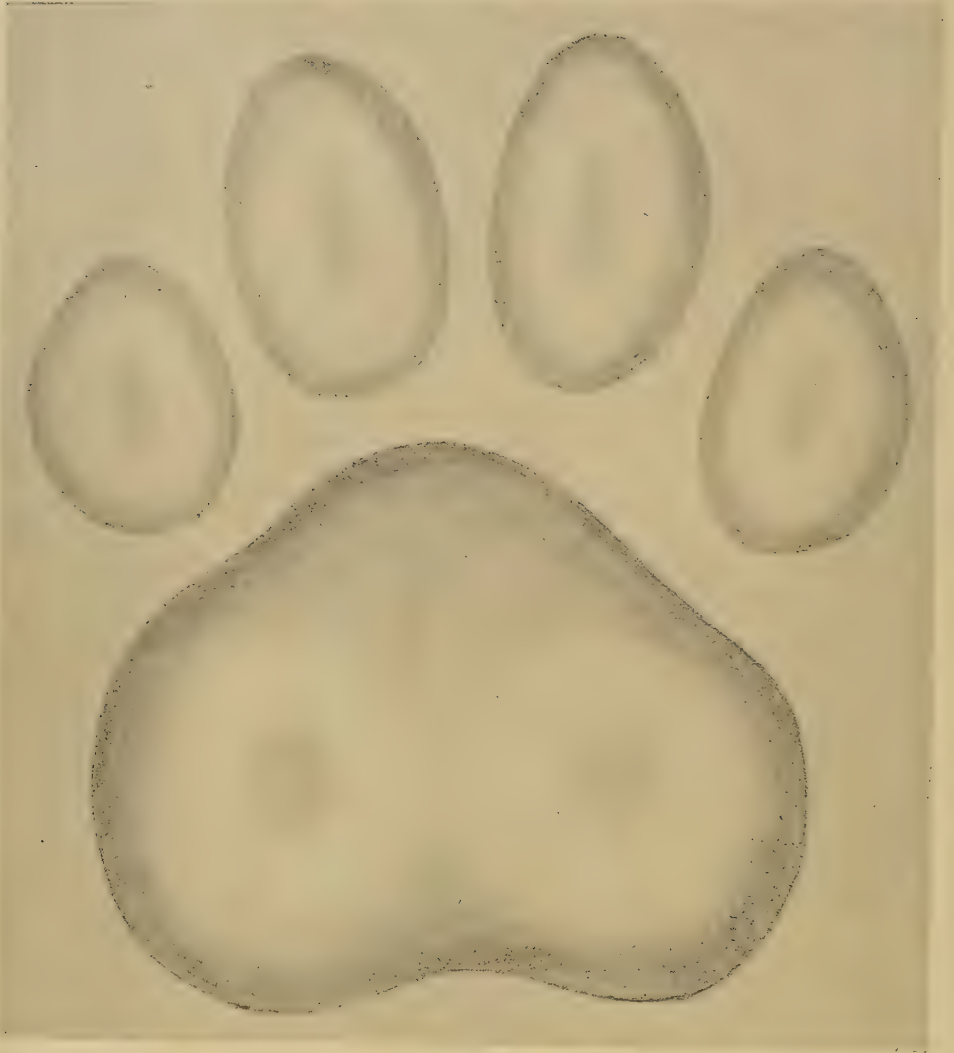


PLATE XXX.

LION (♂).
(Life-size).

It is only on sand, or soft mud, that a lion-track shows as clearly as this, for, like all the cat tribe, he treads lightly. A lion and leopard only extend their claws when alarmed or when trying to get a grip of anything. The dung is similar to that of the leopard (Plate XXXI.), but larger.

The beginner, should he come on a lion (or lions, for often three or more go together), should take great care with his first shot, for it is the one which counts most. If he hits an animal which retires into thick cover he should wait a little before following, and be ready to shoot quickly. A lion may come on from a crouching position, but he often stands up before doing so. The best place to put the bullet when he is dead-facing is where the throat joins the chest, and for a quarter-facing shot right on the point of the nearer shoulder. Instead of aiming just behind the shoulder, shoot fairly low right through the shoulder bone, as this is a much more crippling shot than the former. So long as a lion shows signs of life shoot at him, for there is no saying what he may do until he is defunct.

Sir Alfred Pease, in *The Book of the Lion*, mentions a case of a wounded lion taking thirteen bullets from .450, .400, and .303 rifles, besides a charge of S.S.S.G. before he died ; so the story that a lion is as easily killed as a duiker only holds good when a vital spot has been hit ; and there are only three vital spots which will crumple him up at once—the brain, vertebræ, and heart. With a good lung shot he will still be able to do damage until its full effects take place by choking him, particularly with a small bullet.

Buckshot is useless at a greater range than ten yards, but a 12-bore shotgun loaded with a round ball in the right barrel and a charge of S.S.S.G. in the left, is a useful second gun ; but never fire the heavy shot until the animal is within six paces or less. When a lion jerks his tail stiffly in the air two or three times look out for trouble, as it is usually imminent.

Many fatal accidents from lion maulings have occurred in tropical

Africa, often to the most experienced men ; and lions kill and eat hundreds of natives annually, and, I believe, since the war they have specialised on human flesh in some districts of Portuguese East Africa. However, notwithstanding this, they are splendid animals, and wilder Africa, without their hoarse grunts and magnificent roaring at nights, will have lost much of its real romance and glamour when their voices are stilled for ever.

LEOPARD

(Felis pardus)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA .	Nyalugwe (or Natave)	CHITONGA .	Chikoko.
CHIYAO .	Chisuwe.	CHISENGA .	Kankanongo.
CHIKUNDA .	Kaingwi.	CHIBISA .	Ingo.
CHIWEMBA .	Mbwili.	CHINGONI .	Ingnewi.
		SWAHILI .	Chui.

Good specimen (♂) (unskinned), 6 ft. (straight).

Height at shoulder (♂), 2 ft. 4 in.

This is the most difficult animal to get a satisfactory chance at in Africa when out hunting, though often easy to get when one waits over a kill.

The best sporting method to get a chance is to find out his usual route, especially from hilly ground, and wait for him to turn up when he descends to hunt in the late evening. I have heard of a leopard developing into a bad man-eater, when his favourite prey was a woman or child, which he used to obtain by approaching

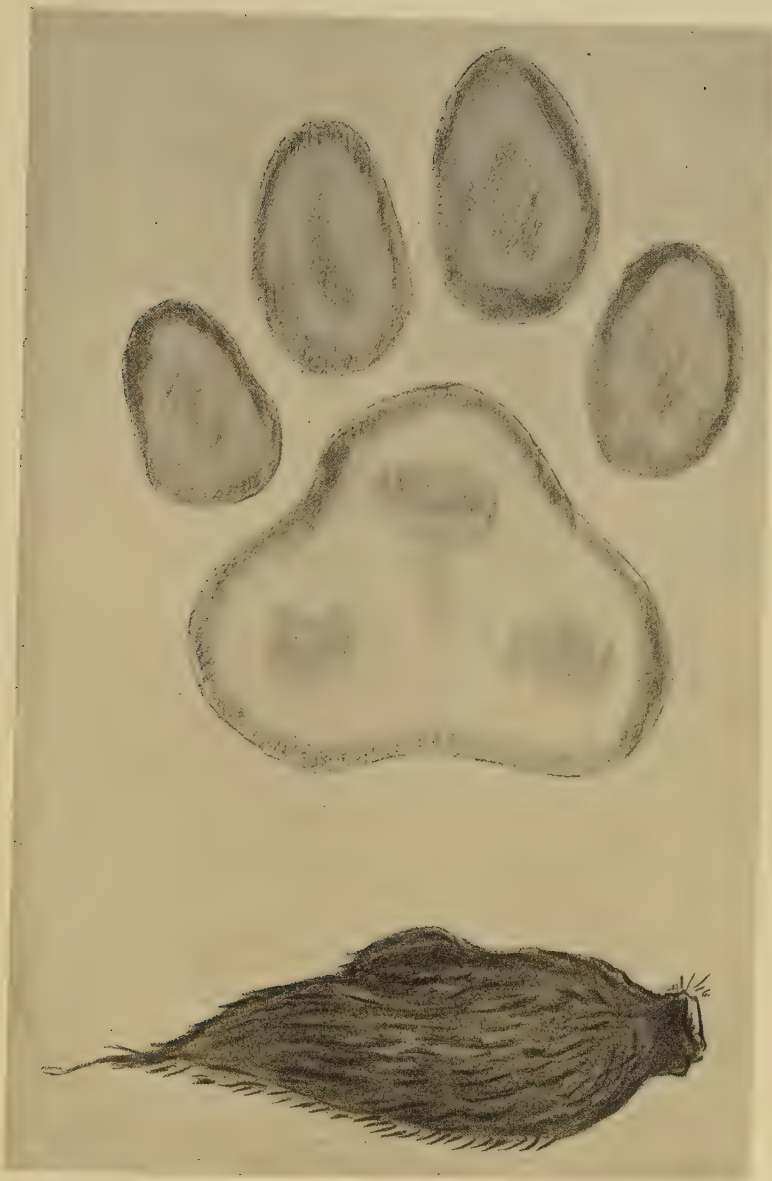


PLATE XXXI.

LEOPARD (♂)
(Life-size).

It is difficult to find perfect tracks of leopards, except occasionally in soft ground. They are probably the hardest animals to spoor up in Africa, for they tread lightly.

close to a small village at night, where he lay in wait until some one went outside a hut.

When a leopard is disturbed in the bush all one sees is a flash of yellow as he jumps from the grass on an anthill, or leaps from the overhanging branch of a tree. In a couple of seconds he is out of sight and away. Their sawing grunts are often heard at night, and they must kill a great amount of game, such as duiker, oribi, klipspringer, bushbuck, and impala, as well as monkeys, in country where they are to be found. I have an idea that they do not often interfere with baboons, except when they are fortunate enough to find one which is detached from the troop, as the old males would give a leopard a pretty hot time if they got a hold of him.

I suppose the leopard has a greater range than any animal in Africa, for it exists almost everywhere, and there is a great variation in their size and markings. In Northern Africa, I believe, they grow almost as large as a lioness, but in Nyasaland and Northern Rhodesia they do not reach such a size. The hill leopard is usually smaller and more profusely spotted than the plains type, and, the natives assert, more ferocious.

When natives are hunting buck in parties occasionally a man gets clawed by a leopard he has stepped on, and single people on a lonely bush path have sometimes been attacked, though a man usually manages to drive off, or kill the beast, with the spear or axe he always carries on these occasions. Owing to its cunning and slinking habits the leopard will be the last survivor of the larger carnivora in Africa.

CHEETAH OR CHITA

This animal is so scarce in the country I write of that I know little about it. In all my wanderings I never saw a living specimen. Besides differing from the leopard in build and markings, its chief difference is that its claws are not fully retractile. It is famed for its running powers at short distances, though it soon gets winded when pressed on horseback. Selous, in his *African Nature Notes and Reminiscences*, mentions overtaking two on horseback with some friends, so I fancy it obtains most of its prey by stalking to close quarters and then making a quick rush. It has not the power or courage to tackle anything but the smaller antelopes.

SERVAL

(*Felis serval*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA .	Ndusi or Ndudzi.	CHISENGA .	Mbale.
CHIYAO .	Njusi.	CHIBISA .	Mbale.
CHIKUNDA .	Nzunza.	CHIWEMBA .	Mbale.
CHINGONI .	Njosi.	CHITONGA .	Likote.

Although this animal, like the hyena and hunting dog, which I shall mention later, are not, strictly speaking, sporting animals, I shall give a few brief notes on them, as they are sure to be seen or heard at one time or another. The serval is a pretty little animal with a nice skin, and should the young hunter get a shot at one he should take it, for they are not often seen in the daytime, as their habits are almost wholly nocturnal.

It has fairly long legs, a short tail, and long ears, and stands about 18 inches at the shoulder. It is marked on a yellowish skin with spots and stripes, and, I believe, can climb trees. It feeds on rodents, guinea-fowls, and other birds ; and when kept in captivity



PLATE XXXII.

SERVAL.

Near hind foot.

The dung is shown below.

Off fore foot.

will soon work havoc in the fowl-run if it gets loose. The natives either trap a number, or kill them with their dogs, for I have often been brought the skins to buy or barter for a few cups of coarse salt or a yard or two of calico.

SPOTTED HYENA

(*Crocuta crocuta*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA	. <i>Fisi.</i>	CHITONGA.	. <i>Pundu.</i>
CHIYAO .	. <i>Litunu.</i>	CHIBISA .	. <i>Chimbwe.</i>
CHIKUNDA	. <i>Kuzumba.</i>	CHIWEMBA	. <i>Chimbwe.</i>
CHINGONI	. <i>Impisi.</i>	SWAHILI .	. <i>Fisi.</i>

Height at shoulder (♂), 2 ft. 6 in.

Weight (♂), 125 lb.

There are two varieties of hyenas in Nyasaland—the spotted and the brown, and my remarks refer to the former, as the latter is so scarce that it is very seldom seen.

When living in the bush hardly a night passes without one or more hyenas being heard, and should there be any meat or bones about, the scavengers arrive in numbers to dispute their possession.

When the carcase of an elephant is left in the bush they will arrive in scores, and the noise they make is most entertaining. They howl, shriek, cackle, clack, and laugh, and I can remember several nights when their weird noises have kept me awake for some hours, listening to an inferno of animal ejaculations, which no one could believe were possible until he had had the experience of hearing them himself.

Hyenas principally feed on bones, and it is remarkable how they chew them up. I fancy they swallow them in lumps and the powers of their digestions do the rest. They are not, as a rule, dangerous to the European, but it is unwise to sleep with a tent



PLATE XXXIII.

HYENA

(Life-size.) (Dung a bluish-white.)

These animals eat many bones, for which reason their droppings are light coloured.

open, unless one has a curtain of mosquito net between one's face and a possible intruder. Many natives in Africa are going about with half their faces missing, or a big chunk removed from a leg or arm—the work of these treacherous beasts done when they were asleep in the open.

Even with a mosquito net over a camp-bed there is no certainty that one would be safe, for one night I suddenly awoke with a feeling there was something in the tent. Immediately on becoming conscious I smelt a foul breath close to my head, so began to lift the net up to get hold of my rifle, which I always kept leaning against a wooden box, on which was a box of matches and my candle-lamp. At my first movement there was a scuffling sound of an animal, which could only have been a hyena rushing outside. There was no moon, and though it was a starry night the light was not strong enough to get a shot at the animal, which disappeared into the bush.

I have little doubt that the presence of the mosquito net was responsible for the animal's hesitation in not taking advantage of his opportunity; but ever afterwards I resisted the temptation of sleeping in an open tent, and preferred to perspire with heat rather than risk losing a large proportion of my countenance.

An interesting feature of this episode, which happened on the outskirts of Maponda's village, in Central Angoniland, was the fact that it was the smell of the hyena's breath which awakened me to the danger. Every one knows how some well-known scent can stir the memory, or flash a thought to the subconscious mind; and I believe it was that which awakened me, for I never remembered hearing a sound of the animal's approach.

Hyenas usually live in hilly ground, and descend in the late afternoon to look for food. They have regular rounds which they pursue nightly, and haunt the outskirts of all villages for any offal they can pick up. When lions are numerous they demolish the scraps and bones, and their jaw muscles are probably much more powerful than are those of the great cats. I have known a single hyena drag away a large slab of hippo skin weighing about 200 lb. for over a hundred yards. He pulled it backwards, as was evident by his tracks.

An average-sized hyena I once weighed was 125 lb., so I should imagine a very large one would weigh about 150 lb.

WILD OR HUNTING DOG

(*Lycæon pictus*)

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA	. <i>Mbulu.</i>	CHIKUNDA	. <i>Mbinzi.</i>
CHIYAO	. <i>Lisogo.</i>	CHINGONI	. <i>Ndacha.</i>

Weight (♂), about 75 lb.

This animal is the wolf of Africa, although the Boers call the hyena by that name. The hyena usually goes about singly until a large carcase is found when they collect from different directions; but the hunting dogs run in big packs of from ten to sixty or more in number. They are a veritable pest, for their method of running game frightens everything in the locality they invade, so that after a visit from a pack a district is cleared until the animals have

recovered from their fright, and begin to wander back to their old haunts again.

Once they get on the tracks of their quarry they are seldom deflected from their course, and the only manœuvre which puzzles



PLATE XXXIV. HUNTING DOG
(Life-size).

As these animals hunt in packs of from ten to sixty animals, when the spoor of one is seen there are usually many overtrodden tracks about.

them is when their intended victim crosses running water, although I fancy they are not long in getting across and picking up the scent if they are within sight.

Near the Loangwa River, in 1905, I witnessed a pack of quite fifty dogs chasing a waterbuck bull. He was going all out and

looked almost done. It was late in the afternoon, but I followed the spoor for about two miles, and had to leave it so as to get back to my wattle-and-daub hut before dark. Possibly the waterbuck managed to get a few miles farther, but I am sure the dogs got him unless he got across the river. These dogs do not appear to run on scent at a great speed, at least I have never seen them go anything like so fast as a collie dog; but they have an easy, long-winded stride, and are tireless and tenacious, so I fancy they often get their quarry.

An old native I was talking to as he sat in the shade of a tree in his village, once pointed to a hill, about half a mile away, and told me that when he was young he saw a pack of wild dogs chasing a lion up the slope. The dogs got him at the top, and killed and ate him there. I imagine he was an aged animal, for I can hardly think that an adult lion would succumb to these dogs if he were in full possession of his powers.

The natives fear hunting dogs greatly, and have often told me how fierce and dangerous they were, though on several occasions when I have emptied my magazine rifle at various members of a pack I never saw one attempt to retaliate in any way.

I have heard them making a clacking sort of bark, which sounds like kak-kak-kak, and a long-drawn kōō-o is sometimes heard. When fired at they retire in a leisurely fashion, which, instead of being a sign of fearlessness, is more an indication of indolence, I think. If the grass or cover is too high for them to see over, or through, they jump on their hind legs to look back at the disturber of their peace.

On one occasion I came up to one I had wounded, and although

I was only within a few feet of it it never attempted to do anything before I put it out of pain with a bullet through the head. The poor creature was probably too far gone to retaliate, but I would not have liked to approach so closely a wounded lion or leopard in the same circumstances.

Although the wild dog is a pest, one cannot help admiring his fearless and strenuous mode of hunting.

However, his wasteful habits and the disturbance he causes in a game country are sufficient reasons for thinning his ranks whenever the opportunity offers.

Notes on the Crocodile, Zebra, Warthog, and Bushpig

CROCODILE

NATIVE NAMES

<i>Language.</i>	<i>Native Name.</i>	<i>Language.</i>	<i>Native Name.</i>
CHINYANJA .	<i>Ngona.</i>	CHINGONI .	<i>Ngwenya.</i>
CHIYAO .	<i>Ngwenya.</i>	CHITONGA .	<i>Ngona.</i>
CHIKUNDA .	<i>Nyakoko.</i>	SWAHILI .	<i>Mamba.</i>

A good specimen, 13 feet.

BY no stretch of the imagination can the crocodile be termed a sporting animal, and my only reason for including him here is to warn young hunters against giving one of these loathsome creatures a chance of ending his career in a horrible manner.

There are several things it is extremely dangerous to do in places where crocodiles exist, and they are present in large numbers in most of the bigger rivers and lakes in Africa. Never bathe in any river, especially if it is at all muddy, as a ravenous croc may slip up quietly, and either seize the person in his jaws, or with a swirl of his tail bring him within reach of the same deadly trap.

Angling is becoming more popular now on the big African rivers, and it is a dangerous pursuit, for a man cannot watch his spoon, or minnow, and at the same time keep an eye on a possible reptile which may be lurking near.

Thousands of Africans are taken and eaten annually by croco-

diles, and although the deaths of only a few white men from the same cause are on record, young men are apt to take needless risks through sheer ignorance.

In 1904 I was after hippo in the Bua River some twenty miles from Fort Manning in Nyasaland, and saw a bull rising near the middle of the stream, so being quite ignorant of potential danger I went into the muddy water up to my waist. The hippo rose and I immediately fired at it, and next moment was nearly carried off my feet by some object grazing my right leg. I did not take long to reach the bank, and on examining the spot where I had been struck found only a bruise and a little skin missing. I am pretty certain that a croc was just preparing to seize my bare leg when the concussion of my shot scared it, and in turning it just grazed my leg with the end of its tail. It was an excellent lesson, as I never went into muddy water again by myself. It is quite safe, as a rule, for a number of people to ford a river if they are close together, and keep hitting the water with sticks on their way across.

By far the fullest and most interesting information I have read on African crocodiles (as well as about other subjects on game and natural history) is contained in Major J. Stevenson-Hamilton's book, *Animal Life in Africa*.

In my *Memories of an African Hunter* I seem to have been in error about the feeding habits of crocodiles, for I expressed doubts that they stored dead bodies, on the supposition that if they did so other crocodiles would come and take the meat. It seems, from Major J. Stevenson-Hamilton's explanations, that the crocodile's tongue is rudimentary and unfunctional, and the muscle which corresponds to that organ is tied fast throughout to the lower jaw.

The meat has, therefore, to be swallowed whole, there being no means of proper mastication, and it is, therefore, eaten in a putrid condition. Another interesting point in the same chapter is that the lower jaws of crocodiles are immovable, and only the upper jaw can be worked up and down.

It is difficult to kill a crocodile so instantaneously as to prevent it slipping off a bank into the water, and out of probably a full hundred I have hit only a small proportion have been anchored where they lay.

On a trip up the Zambezi in 1908 in the river steamer *Hamburg*, I hit the largest crocodile I ever saw, and I have seen hundreds in Africa and India. This amphibian had a body as thick as a hippo at the shoulders, and the skipper of the steamer, who had been running up and down the Zambezi for several years, told me he had never seen another like it.

When we saw the animal the skipper, whose name was Horne, said: "I must get you nearer that fellow," so he told the steersman to take us closer to the bank. When we got within seventy-five yards he gave orders to slow down, and going against the current the steamer soon lost way. I had a single .303 Fraser rifle which was beautifully sighted, and I used an expanding bullet, of course. The croc was in a quarter-facing position, so I aimed carefully between the neck and shoulder and fired. After my shot the animal stiffened at once, so I picked up my binoculars and saw blood pouring out of the wound.

Neither the skipper nor myself knew that on the lower deck were two half-caste Portuguese soldiers who had loaded their old Sniders, but we soon became aware of the fact, for two loud bangs

rang out. I was still watching the croc, so after the explosions I saw the two bullets hit the sandbank some way above the crocodile. Either the landing of the bullets, or the sound of the shots was heard by the croc, for he gave a wriggle and slipped into the water before I could get another cartridge into my rifle.

It was a great disappointment, for Horne told me he intended to get out the steamer's dinghy and go with me to measure the creature had he not escaped. I saw Horne a year or two after this incident and he said he had never seen the animal again, or heard from any others that it had been noticed, although several of the skippers of steamers had seen this enormous creature before I had hit it. I cannot risk any statement as to its measurement, for such could only be problematical, but it must have been similar to two colossal crocodiles Sir Samuel Baker mentions in his *Wild Beasts and Their Ways*, as having seen stretched on a rock in the Nile. According to my experience I think 14 feet is a large-sized specimen of a crocodile, but that a few attain far greater proportions is well known.

When living at Mzazas, on the Loangwa River, in 1905, I used, when I had nothing better to do, to wander along the river looking for crocs, and I shot quite a number at one time or another. I never saw any extremely large ones, but any crocodile over 10 feet in length is a potential man-eater. The natives, in parts where they are dangerous, build a palisade of poles in the water where they can bathe and fetch water in safety.

When much shot at they become very wary and knowing, and all one will see are the two knobs above the eyes, and possibly the tip of the nose, as the amphibian floats just under the surface on the

constant look-out for prey. They have excellent eyesight, for on many occasions I have observed that they had noticed me when I showed myself in trying to get within short range of them.

Their strength is great, and there is the well-known case in British-East Africa of a crocodile pulling a full-grown rhino into the Tana River. They use their jaws for gripping only, and drown their victims by holding them under water.

Natives are sometimes knocked out of their dug-outs by them, and to execute this operation they approach fairly close and then make a swerving rush, bringing their tail round as they pass near.

Probably the most killing shot is one through the brain, which lies about two inches behind the eye, and on the same level. This organ is so small that it takes extremely accurate shooting to hit it. The best place, in my opinion, is either in the middle of the neck or on the point of the shoulder, but it is all a matter of the position presented.

I once shot and retrieved a small croc measuring about 9 feet, from a steamer in the Zambezi, and the skipper, named Stewart, sent the natives in the dinghy to get it. It was hauled on the iron deck of the barge we were pulling alongside, and then cut up, as these Zambezi natives are fond of the flesh. The heart, after being cut out, was laid on the hot metal deck, and noticing it was palpitating I took the time. A visible movement was apparent in it for three-quarters of an hour. This animal was a female and a lot of eggs were removed from it.

An interesting point about the crocodile is that he has a perpetual stock of teeth, for as soon as one wears away a new one presses up from beneath to take its place.

Owing to their lethargic habits these reptiles probably live to a great age, and likely after reaching a moderate size grow more slowly. Some of the leviathans, such as the one I hit and lost in the Zambezi, must be extremely old ; and it is appalling to imagine the number of deaths of other creatures they have been responsible for during their protracted existence.

ZEBRA

(*Equus burchelli*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA	. <i>Mbizji.</i>	CHITONGA.	. <i>Boli.</i>
CHIKUNDA	. <i>Mbidzi.</i>	CHIBISA .	. <i>Chimbweti.</i>
CHIYAO .	. <i>Mbunda.</i>	CHISENGA .	. <i>Bizi.</i>
CHINGONI	. <i>Lidwvi.</i>	SWAHILI .	. <i>Punda-milia.</i>

Weight about 500 lb.

There are three different species of zebra in Africa, Burchell's, Grevy's, and the mountain zebra.

Grevy's is the largest and finest, and inhabits Kenya Colony and adjoining territory ; the mountain species belongs to Southern Africa and is scarce ; and Burchell's, which scientists have divided into several sub-species, is very plentiful over a large range in Africa.

This is the type I know, and although beautiful animals when seen grazing in some bush glade, or out in the open, they are rather a nuisance. When disturbed they rush off, making a great noise and dust, which puts more sought-after game on the alert.

I have seen up to fifty or sixty in a herd in North-Eastern Rhodesia, but the usual number is from ten to twenty beasts. Zebra have

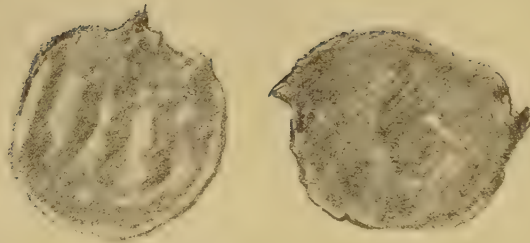


PLATE XXXV.

ZEBRA (♂)
(Life-size).

The track of a Zebra, especially those frequenting hilly country, often shows the marks of a chip from the edges of one or more hoofs.

one peculiarity, I noticed, and that is in feeding they nearly always all walk with their heads pointing in one direction—up-wind.

When the sun is full on them they are a yellowish-white colour, but when that orb is behind them they then appear blackish in tint.

They are fond of hilly ground, and go quite high, doubtless for coolness and to get away from the flies which constantly annoy them.

In forest or bush country the first intimation of a herd will be the switching of their tails, and although they might be called protectively coloured when seen in the lights and shades of timber or brush country, I do not consider this has anything to do with a benevolent nature-scheme devised as a safeguard to them. Nature generally makes a better job of her work than giving an animal a coat suited to its environment, and then adding a big tail that flops about, and a pair of large ears which keep twitching every few seconds. Moreover, the carnivora hunt by scent and usually at night, so the smell of the animal's body and droppings are an infallible guide to the prowler after meat.

Closet-naturalists, although often very able men at detecting structural variations, are apt to fly to the wrong conclusions on points which have not come under their personal observation; and the theoretical problem of "protective-coloration" is one of the most absurd which was ever conceived—at least regarding its application to the mammalia of Africa. Game animals are certainly often coloured to suit their natural surroundings, but they might as well be pigmented with all the colours of a rainbow for all the difference it makes to their enemies, which use their powers of scent to smell the odours of their prey; and their keen sight to see the

constant movements which all living creatures constantly make during the hours of their animated existence.

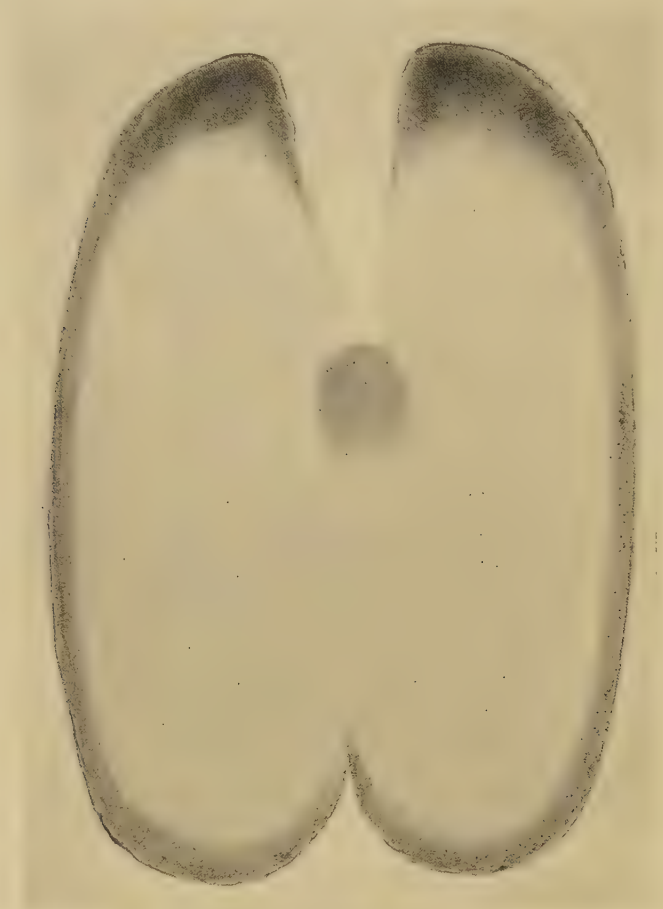


PLATE XXXVI.

GIRAFFE (♂)
(Half life-size).

The Giraffe does not exist in Nyasaland, & only one herd is known in North-Eastern Rhodesia, which is strictly preserved. This track came from a bull in this herd. This animal is more plentiful in Kenya Colony & adjacent territories, & can only be shot on special licences, but few sportsmen will wish to shoot more than one specimen of such a harmless beast.

Lions kill many of these animals, and I have sometimes come on the scene of such a tragedy in my wanderings in the bush. This

does not seem to decimate their numbers appreciably, so they must be prolific animals. A zebra in good condition must weigh about 500 lb., as they are cobby beasts.

Many have been tried in captivity and have proved rather useless as they have little spirit, so they are never likely to replace the use of horses, mules, or donkeys as draught animals. Their immunity, however, to "Nagana," the tsetse-fly disease, which exterminates domesticated stock, should make them useful in countries where stock cannot be kept, so after a few generations of proper training they may yet prove useful in tropical Africa.

WARTHOG

(*Phacochærus æthiopicus*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA	. Njiri.	CHICHEWA	. Kapulika.
CHIYAO	. Mbango.	CHIWISA	. Kachia.
CHIKUNDA	. Njiri.	CHIWEMBA	. Njiri.
CHINGONI	. Ncagu.	CHISENGA	. Njiri.

Good specimen, upper tusk (♂), 10 inch. on curve.

Approximate weight (♂), 180 lb.

Abundant over all Nyasaland and North-Eastern Rhodesia, this rather ugly creature possesses one good feature which cannot be said for some of the more beautiful fauna—his flesh is good when his years are few, and he provides it easily, for in the burnt dambos he is often to be seen grubbing for roots.

Natives are very fond of warthog flesh, so I have never had any compunction in killing them often, and I have always preferred

shooting a warthog to an antelope for this purpose, when I got the chance.

The natives themselves kill a large number by hunting them with their dogs, and it takes severe exercise to get within spearing distance of them on foot. If horses could be used they would doubtless afford good pig-sticking, for I have seen large patches of



PLATE XXXVII. WARTHOG (♂)
(Life size).

It is often difficult to differentiate from that of the Bushpig.

country very suitable for such sport, only these places are liable to be frequented by tsetse flies, which quite prohibit such an amusement.

I once weighed an adult boar, and with the paunch included it scaled 186 lb. ; so I should think an extremely heavy specimen might reach a weight of 200 lb.

Warthog are seldom dangerous, though it is not wise to approach a wounded one too closely without a rifle ready for use. They are

usually seen in couples, or a sow with a big litter. When they run they hold their tails straight up, and for some reason this habit affords the natives amusement. Often one will see them covered with slime, as they are fond of wallowing in mud-holes. A thickly coated pig with yellow mud plastered over him, surmounted by his hairy mane, and long warty face, is a picture of ugliness; so when natives have quarrels they call each other *Njiri*, which is the furthest they can go, I suppose, in an opprobrious term of reproach.

Warthogs are tough animals, so need to be hit well forward or they can carry away bad wounds. I have not found them dangerous, and out of a large number I have shot only two attempted to use their tushes, and they were approached closely in heavy grass after being wounded. Both those plucky beasts were sows. Lions and leopards kill a great many, but the large litters dropped by the sows seem to keep their numbers abundant.

BUSHPIG

(*Potamochoerus chæropotamus*)

NATIVE NAMES

Language.	Native Name.	Language.	Native Name.
CHINYANJA	. Ngururwe.	CHIKUNDA	. Nkhumba.
CHIYAO	. Ligulawe.	CHIBISA	. Kapole.
CHINGONI	. Ndudu.	CHIWEMBA	. Kapole.

Approximate weight (♂), about 200 lb.

This animal is plentiful in all heavily bushed country, but, keeping more to cover than the warthog, is less often seen. He is a pluckier animal, though his tushes are smaller, and I have heard

of a number combining to chase a leopard which they eventually treed.

There are several varieties, and I have noticed a great difference in the appearance and size of specimens I have seen in Nyasaland and North-Eastern Rhodesia. Those inhabiting the foothills of

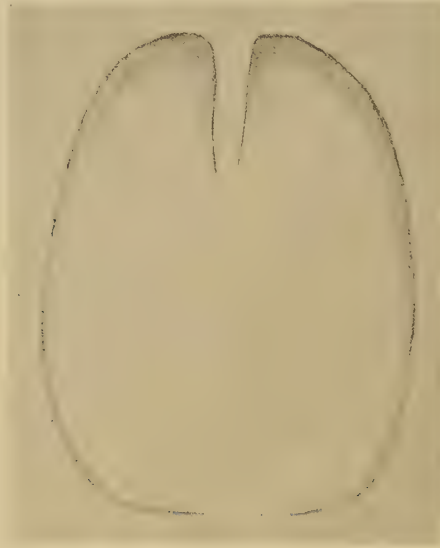


PLATE XXXVIII. BUSHPIG (♂)
(Life-size).

Very much like that of the Warthog.

the Mlanje range in the former country were much larger in body, and had a much more profuse amount of hair on the neck and back than had the pigs I shot in North-Eastern Rhodesia and the northern parts of Nyasaland.

Lions often kill them, but I doubt whether the leopard often does so, as the bushpig is a courageous animal, which is likely to put up a good fight unless he is taken unawares by a leopard springing on his back from the limb of a tree.

Bushpigs do much damage to the native gardens, so in places where these are made adjoining heavy bush the villagers construct long fences to keep them out. They are too lazy, however, to keep them in repair, and the pigs usually have little difficulty in getting all they want, until they are eventually caught in a trap.

Like warthogs they are prolific, and man and the carnivora do not seem to make an appreciable difference to their numbers.

In this volume I have not dealt with many small species, such as the jackals, otter, small jungle cats, &c., as they are not sporting animals. Most of them are nocturnal in their habits and will seldom be seen by the sportsman. Should information be wanted on such creatures there are several good books on the subject, especially Major (now Lt.-Col.) J. Stevenson-Hamilton's fine work, *Animal Life in Africa*, published by Mr. William Heinemann.

Big Game and the Tsetse Fly

IT may be said at once that the future prospects of the larger game of the world, but especially that of Africa, is extremely precarious.

There are two vital causes which point to its rapid diminution in the near future, and they are :

1. The apathy of the colonists and authorities with regard to its protection.

2. The love of slaughter, often for profit, by a large section of the community in countries where it exists.

In Africa the present game laws, if properly administered, are sufficient to insure the survival of the principal game animals for centuries to come, but unfortunately the authorities are allowing these regulations to fall into abeyance at the behest of a short-sighted community who, for various reasons, wish the fauna destroyed.

One of the lamest excuses for game slaughter comes from a class who, without real knowledge, assert that the game attracts tsetse flies, which bite domesticated stock and give it *nagana* disease.

It is not a fact that game always brings the fly, and I have often seen game where tsetse are non-existent and *vice versa*. No amount of argument to the contrary will controvert this statement, for it is true.

Supposing the game is totally killed off in some large district (which, I may say, would be no easy matter in heavily bushed country)

the flies would still remain and be ready to bite domesticated animals as soon as they were introduced.

I remember a case like this in 1903, near Zomba, in Nyasaland. There was a patch of country lying between that township and the Shire River, where there was hardly a head of game. A farmer near brought in some bullocks to use as trek oxen, and within a year or two they had all been killed off by *nagana* disease. There was not sufficient game to be held responsible, and there were no tsetse in that locality until the oxen came, so the game had nothing to do with the losses of stock incurred. There can only be one result from game extermination, and it is that its extinction completely spoils the face of the country to all nature-lovers and fair sportsmen. Then there is the class who state that, apart from stock disease (*nagana*), there is the risk of sleeping-sickness, as certain game animals form a host for the germ (trypanosomiasis) of that disease.

Personally, I believe that this is an exaggerated view, for the main hosts are the natives themselves who have been bitten. The white colonist cannot possibly go in for cattle-ranching or planting and agriculture, without procuring the help of the natives, as their services are essential for such work. Then, if certain individuals have contracted sleeping-sickness, flies bite them and inoculate others, for I believe they can move about in an infectious state before they become lethargic and die. Therefore we are no further on, except, as I have said before, a country has been spoilt by the extermination of an interesting fauna.

Only one thing can supply a rational remedy for all tsetse-borne diseases, and it is for scientists to discover some contagious deadly disease with which to inoculate and kill off the fly.

It is useless fencing in comparatively small areas of country to keep out game, for such methods are sure to prove ineffective.

A great many people who make the excuse that *nagana* and sleeping-sickness are a justification for game slaughter, are really thinking of other things. Some wish the game reserves abolished, so that, for a short period, they can make a profit from the meat, hides, and trophies of the game; while there are others who, for purely speculative purposes, wish the game reserves done away with, so that they can deal in the land.

Their purpose is purely a mercenary one, and not, as far as they are concerned, a wish for *bona fide* settlement.

In the *Journal of the Society for the Preservation of the Fauna of the Empire* (New Series, Part VI., December 1926), there is an account by Mr. R. W. Jack, F.E.S., Chief Entomologist to the Government of Southern Rhodesia, which a note by Major E. E. Austen puts: "is of much interest." It certainly is to any one who knows much about the real habits of the common tsetse (*Glossina morsitans*); for this report deals with a most absurd experiment in a patch of country lying between the Hunyani River on the east and the Angwa River on the west. It reports that on farms to the south of this area there have been losses of stock by tsetse flies, so it was decided to fence off an area of ten miles in width between the rivers mentioned and kill off the game, presumably with the idea that when the fauna has gone no more stock will be affected. The game consists of waterbuck, kudu, sable antelope, and eland; and bushpig and a few hippo and rhino are mentioned. It does not say what the fencing and labour to erect it cost, but it is palpable to any one who knows anything about the habits of game and tsetse flies that it would have

been cheaper to omit the fencing operations and fit out the native labourers with butterfly nets to catch the flies !

What difference can exterminating the game out of an area of ten, or even fifty, square miles make in either the numbers of the game or tsetse, when one knows that between the capacious Lomagundi district and north to the Zambezi the area consists of thousands of square miles !

Mr. Jack seems surprised that when the common tsetse was numerous in the Transvaal long ago it retreated before the advance of colonisation, and it does not seem to do so in the Lomagundi district in a similar way. Why, the reason should be apparent when one considers the difference in the terrain, the one consisting of open grass veld and the other a heavily bushed country ! It seems to me that entomologists could, with a certain amount of experiment and research, find some contagious and fatal disease which they could spread amongst the tsetse in these areas where they abound, and by doing so they would attack the problem at the root.

By slaughtering off the game because in some cases they form a host for human and stock diseases seems to many to be acting in the dark, as a number of other creatures likely form hosts for these diseases, and other flies, besides tsetse, probably act as carriers. The investigators who have studied the problem admit it is full of complexities, and by no means are all of them convinced that exterminating the game is to supply the remedy which is being sought.

In my opinion it would simplify matters greatly if, instead of trying useless experiments to extirpate the game in bush and forest districts, scientists should get together and try to work out by

experiments a means of extirpating the fly. We all know that insects die of contagious diseases at times, and there are, for example, bee diseases which periodically sweep off the swarms. Possibly similar complaints might destroy tsetse flies were they introduced.

The game of Africa is a most valuable asset, so it is the duty of our authorities to conserve it. Should they allow themselves to be influenced by the vandals who wish it all swept away, there is no doubt that future generations will stigmatise such an action as nothing less than a malicious crime. Once it has gone, no power on earth can restore it, and, after all, Africa would be a sorry place to live in without its wild game. It is a sad reflection to think that the advance of a so-called civilisation should spell spoliation to all living things except man, who, in many cases, is much less interesting than many other forms of life he supplants.

The common tsetse (*Glossina morsitans*) seldom goes higher than an altitude of 3000 feet, and it is found in open bush country and often in heavy grass, where it can get enough shade. I believe it has been proved to transmit sleeping sickness, but the main carrier of that horrible disease is the species named *G. palpalis*. There are several other species, such as *G. fusca*, which is larger and browner in colour. Sleeping sickness is a totally different disease to that known as "sleepy sickness" (encephalitis) in Britain and Europe, though some seem to confuse the two.

The tsetse fly does not lay eggs, but deposits larvæ, and the old yarn about them laying their eggs in buffalo dung is wrong, though on several occasions I have seen them deposit their larvæ (not eggs) in buffalo droppings.

The usual place for a white man to be bitten is on the back of

the neck. The flies settle quietly on the rim of the hat, or the coat, or shirt, and then hop on to the flesh. When they probe a nerve there is no mistake about it, but after the first stab there is no ensuing pain. Natives who may be naked on the back are often bitten there, and when following my carriers in single file, I have often counted many flies on them. I have been bitten by hundreds of the common tsetse, and several men I have known got sleeping sickness in parts of the country I have shot in. It is a wise plan to carry a zebra tail as a switch to flick them off with, and natives in fly country always break off a leafy branch for the purpose.

When the Sleeping Sickness Commission, under Sir David Bruce, visited Nyasaland in 1912, I sent sixty slides of game blood to their headquarters for examination, and in not one of them was found the germ of sleeping sickness. These slides contained the blood of such game as elephant, hippo, eland, roan, sable, hartebeest, zebra, reedbuck, warthog, &c.

Doubtless there are people in the large district where these animals were shot who would have suggested that the game was a menace in case they might form hosts for sleeping sickness, and slaughter it all off, or try to, for, as I have remarked, in heavy bush it would take years to destroy it. Fortunately for the game, the rainy seasons provide a natural close-time, as it scatters owing to a plentiful water and food supply.

Game all over the world has been slaughtered for the most puerile and senseless reasons. In the U.S.A. some idiotic person, or persons, started an elk club, and thousands of wapiti (erroneously called "elk" in America) were slain, solely for their molars.

Then the Altai wapiti is getting scarce because the horns are

used in the East for making medicine, and rhino horns are also in great demand for the same purpose. Once when I was packing some trophies at Chinde, on the east coast of Africa, a Chinese carpenter who was working near spotted some rhino horns and he came and offered me thirty shillings for them, and was probably surprised when I told him I did not sell my trophies. I asked him why he wanted them, and he said when ground down they made a strong medicine for most diseases.

The bison (called "buffalo" by mistake) of America were practically exterminated for their hides and meat, but mainly the former, and then the carcasses of the victims were often left to rot on the prairie.

Then other creatures, such as seals, sea-otters, reindeer, and many birds possessing gorgeous plumage, are killed to satisfy some want which is either useless, or could be supplied by other objects not entailing the loss of animal life.

Formerly, I lived not far from the Tweed River, and dozens of salmon were poached every year when the fish were running up the river to spawn. This nefarious slaughter annually takes place, so that the scoundrels can get the roe which they sell to dealers, who in their turn, likely dispose of it to trout poachers. I believe this cruel custom has been carried on for ages, but it speaks badly for the sporting proclivities of certain members of our race when such dastardly deeds are done. When the love of petty gain comes into question all types of wild life are at the mercy of such people, for there is no moral law within them which can appeal to their sense of fairness. When the law deals with infringements of game regulations it fails to differentiate sufficiently between certain cases,

and when it is proved that the transgressor is breaking the law for pecuniary reasons I think he should be much more severely punished than the man who does so for the love of sport.

For instance, in Africa, a man who shoots a cow elephant which is really meaning mischief may be fined more heavily than some butcher who kills several rare animals so as to sell the trophies and meat. The two cases are in a totally different category, but the authorities do not always class them so.

Many of our authorities are men who care nothing for big game shooting, or natural history in any form, so it is a pity that the Government do not oftener appoint officials to important African and colonial posts who are really interested in the preservation of the fauna of the Empire. The rapid diminution of many rare and interesting species is of far greater moment than many of the other subjects which engross their energies, and there is plenty of money spent on far less worthy objects than the preservation of our natural life. It is a sad commentary that so many people should value at so little much that will be beyond price when it has vanished from the face of the earth for ever.

“Elusive” not “Protective” Coloration in Mammals

C ONSTANTLY letters in sporting newspapers and magazines appear on this subject, and I, not long ago, read a short article on kudu antelopes, in which the writer stated that an extra white stripe or two on the hides of the lesser kudu, above the number usually found on the greater kudu, was a provision of Nature intended to be protective to the smaller and scarcer species. This can only be treated as an absurdity.

Study-naturalists from their musty dens are very fond of expounding theories on Nature's ways and intentions from the human standpoint, and many of their theoretical conclusions often look very interesting on paper, but it does not follow that they portray actual facts, and this matter of so-called “Protective coloration,” so far as it applies to mammals, is a fallacy. When its application is attached to insects the study-naturalist is on firmer ground, as many forms of insects remain for long periods in a state of quiescence, when their coloration is certainly a help to them regarding survival in the struggle for existence.

Besides the coloration of an animal's hide, one has to consider its general habits, its body scent, and also the habits of the creatures which prey on it. By doing this we begin to see how little use any colour can be as a protective value. Again, had Nature meant this coloration to be a great help in survival, it can be imagined that it would have developed a colour, and that the best for the purpose.

We find, however, certain areas containing animals of different kinds which are all tinted differently. For instance, we have slate-coloured elephants and rhinoceroses, chestnut elands, black and white sable antelopes, blue-grey kudus, strawberry roan antelopes, yellow hartebeests, striped zebras, striped and spotted bushbucks, reddish-fawn impalas, and many other creatures, all different, and inhabiting the same or adjacent country.

The aspect of a country changes between the dry, hot, and the rainy seasons, but in tropical Africa there is little seasonal change in the coats of the various fauna. In Arctic, or temperate climates, some creatures change their coverings, and the theorist immediately flies to the conclusion that this provision of Nature is meant for protection, quite forgetting that the carnivora usually hunt in the darkness, and trace their prey by scent and hearing, and not alone by sight.

Every hunter knows that the first thing to catch the eye is movement, and it is a fact that no animal can remain absolutely still for long, even when asleep, as the ears twitch and the tail wags.

Mammals such as zebras, giraffes, tigers, and leopards are the favourite examples cited by the theorists. Doubtless a herd of zebras standing under forest trees, with the rays of sunlight breaking into the shade below, makes them blend into their habitat, but the hunter who is gazing towards them, immediately catches sight of their tails flopping to keep off flies, and to cool themselves with the constant movement.

At a few hundred yards, when standing in the open, zebras appear almost white when the sun is shining on them, and when it is behind them they look black.

So-called “protective” colours may be a greater safeguard to creatures when hunted by man than against the meat-eating carnivora, which roam about at night, and walk up-wind, so as to get the scent of their prey. Besides the body smells there is the taint of the foot-glands, as all animals have glands in their feet which leave a strong scent on the soil and vegetation they happen to pass over.

All colours must appear much the same in the dark, and although a lion or leopard probably sees much better in darkness than does a human being, both must make their approach through the sense of smell or hearing; and sight does not come into action until they are fairly close to their prey.

The late F. C. Selous in *African Nature Notes and Reminiscences*, one of the best books ever written on sport and natural history, says, on page 13 of that work: “Having spent many years of my life in the constant pursuit of African game, I have certainly been afforded opportunities such as have been enjoyed by but few civilised men of becoming intimately acquainted with the habits and life-history of many species of animals living in that continent, and all I have learnt during my long experience as a hunter compels me to doubt the correctness of the now very generally accepted theories that all the wonderfully diversified colours of mammals—the stripes of the zebra, the blotched coat of the giraffe, the spots of the bushbuck, the white face and rump of the bontebok, to mention only a few—have been evolved either as a means of protection from enemies, or for the purpose of mutual recognition by animals of the same species in times of sudden alarm. Sexual selection and the influence of environment must, I think, have been equally potent

factors in the evolution of colours in mammals, birds, reptiles, and insects.”

Now here are the conclusions of a man who was a most experienced hunter and field-naturalist. Instead of sitting in a room surrounded by books (often written by theorists), and trying to find reasons for such questions as the varying coloration of mammals, he spent years amongst the game, and was able to observe—as have others who have participated in much the same life—that no imaginable colour could be of the slightest use to any animal that is hunted by humans or carnivorous beasts.

Such experience clearly shows that the survival of any species is solely due to its habits of wariness, fleetness of foot, hearing, scent, and sight; and the success of its enemies in appeasing the ever-gnawing pangs of hunger which intermittently trouble them, is also founded on action accruing from the same senses, as well as strength and death-dealing fangs.

It is marvellous that Nature has balanced such powers in the hunted and hunters, and that an almost equal equilibrium is kept, so long as man does not step in and upset the balance of things, which he often does. Then, so to speak, it would seem a matter of two against one when the human and carnivora work against the flesh-providing fauna, but fortunately man also kills many of the predaceous animals which seems still to hold the balance true.

In the heading of this chapter I suggest the word “elusive” is a better term than “protective,” because although under certain favoured conditions there is no doubt that an animal blends into its surroundings, that fact is useless because movement often occurs which immediately lifts the veil. Moreover, the carnivora pay no

attention to colour, for pigment has not the slightest bearing on their scenting powers, and nocturnal hunters are unlikely to find any more difficulty in finding and killing an animal because it happens to be coloured one tint than it would another of a totally different shade.

Man should be able to gain most by the so-called protectiveness, because he hunts by sight and has not the extra powers of keen scent and hearing of the meat-slaying animals, and yet he manages to find by his eyesight animals often hidden in bush, forest, or thick grass. He generally succeeds in doing so by being observant, and noticing movement in the game he hunts, and he does this without the aid of the sense of smell.

Some people deny that the big cats, the lion and tiger, use their powers of scent when hunting for their prey, but find it by sight and hearing. Personally, I believe they make use of all their senses, and use each of them as occasion demands; for it is extremely improbable that Nature gave them senses which are useless to them and inoperative in their chief function in life, which is the finding of food.

Cases can be cited when either scent, hearing, or sight was the means of their success, and it probably depends on varying conditions which especial sense was the one used on any occasion.

If theorists would confine their attentions to insects they would be on firmer ground, because the whole matter rests on the question of quiescence in the prey, but even here they may go astray, for it is quite impossible for man to assert that what seems protective to human eyes is the same to the animal, bird, fish, or reptile hunter, because their capabilities may be, for all we know, far superior to ours.

Theoretical man is much too prone to think that all *ferae naturæ* act under any condition of life in the same way as do humanity, so it will always be impossible to prove, without some shadow of doubt, that a supposed fact is more than merely human assumption.

Man as an entity in the animal world is capable of sitting in judgment on his own kind, and criticising their actions, because he is dealing with something within his ken. When, however, he applies his reasoning powers to the lower grades he may be quite at sea, for it is natural to suppose that creatures of the wild may have specialised and more highly developed organs compatible with their continued survival in the struggle for existence. In fact, they may possess senses man lacks.

Notes on Equipment and Other Matters

THE great essential in camp equipment is lightness, combined with strength. Excessive weight means expense in carriage, or, perhaps a better word is portage.

There is nothing which hampers the movement of a hunter more than having too many goods and chattels to cart about, so the outfit should be kept down to absolute essentials. I only once joined what I may term a wealthy hunting party, but for certain reasons did not stay long with them and was glad to leave and be independent. They were much overloaded with useless non-essentials.

Regarding tents, I had two big Edgington ones at the beginning, but as they each required two and sometimes three men to transport them, I gave them up in turn, and ever afterwards used "Whymper" pattern single-load tents. In this tent the ground-sheet is sewn on to the sides, and I had a special window with mosquito netting fitted at both ends, with outside flaps over them, which could be tied down with tapes when it rained or was cold. It is a great advantage to have the ground-sheet sewn to three sides, as it prevents wind, dust, and rain getting inside and keeps one warmer in chilly weather.

People who have not been there imagine Central Africa always to be hot. The days are often warm enough in all conscience, but the nights, especially at a high altitude, and also at a low altitude in

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river valleys, can be very chilly indeed, so the hunter, to be comfortable and escape the fever that cold often brings on, should be warmly housed, or, in this case, "tented."

The type of "Whymper" tent I used, and in this, I suppose, they are all similar, had jointed poles, but the two top pieces are fixed together by a bolt with ends which go through holes in the top of the tent. The ropes should be made of specially made cording so as not to shrink. When rain is expected do not make the ropes too taut or the pegs will draw, and it is uncomfortable going out in pyjamas or a shirt to loosen them off in the rain. If one hears the ropes tightening, instead of opening up the door-flap a wrinkle is to take a knife or axe head and dig out some earth from under the end of the poles at the two, or four corners in the "Whymper" pattern. Allowing the poles to drop an inch or two immediately reduces the strain on the ropes all round.

The heavy double tents I tried, but disliked, owing to their weight and the extra portorage they needed, had the advantage of an awning, and the "Whymper" tent seldom has one unless specially fitted. This makes the latter much hotter than the double pattern, but this is easily remedied by getting the carriers, when one is camping in one spot for a day or more, to rig up a platform over the tent, on which grass is put. It can, with advantage, be extended in front for 8 feet or so, and then forms a cool verandah to sit under during the heat of a day spent in camp. The best type of camp-beds and tables I have used are the "X" pattern, as they are light and very strong.

Some people think that in cold weather it is sufficient to have plenty of top covering to keep warm, but the cold creeps in as

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much, or more, from below, so there should be a fair thickness of blanket, or some thick material, between the canvas and the sleeper if he expects to have a comfortable night. A kind of fluted mattress which rolls up is very good, but is a bit bulky to carry.

The "X" camp tables are light and substantial, as the slats of wood forming the top are covered by canvas which makes the table rigid.

The best camp chair is the ordinary "deck" pattern, and some people prefer the Indian "Roorkee" type, which takes longer to fix up, and I have seen a raw native spend half a day at it and do it wrong in the end.

I used to carry as a pillow a linen bag which I stuffed with spare shirts, undervests, and socks, and it did very well.

For carrying the blankets and clothes a strong sack made of green "Willesden" canvas is best, and besides the metal fastener it is wise to tie it tightly round with a piece of strong string. Then if it gets into water the contents will remain dry for some time.

For cartridges, books, and papers a water-tight uniform case is essential, and these can be got at any tropical outfitters. They are costly, but are worth the money in Central Africa, where damp, white ants, rats, and other pests all make their presence sadly felt.

A lamp is essential, and I have tried several kinds and prefer a candle one instead of the type burning oil. The oil is sure to get spilt, or leak, and should paraffin get on food stuffs they become beastly, as I once experienced when some got over a big chunk of bacon I had taken as a treat. The pattern of lamp fitted with talc

sides is less liable to breakage, though I once had a better one with glass sides, for which there was a set of spare glasses kept in reserve in spaces at the side of the box it was packed in.

For the tropics a special hard candle is manufactured, and these are preferable to the soft ones which melt flat. This is a point which should be remembered when buying candles at home to take abroad. In Africa the hard kind are always kept in the stores in townships. With regard to candles, and all food-stuffs, it is best to buy these in Africa, as the storekeepers usually keep the best type of goods for the tropics.

Rifles, cartridges, tents, camp furniture, boots and clothes, are probably best procured in Britain, though regarding khaki hunting clothes they can be made very well by a native tailor, if a pattern is given him to copy. In hunting shirts never have a pocket in the right side of the breast, as it catches the toe of the rifle stock and is a bother.

Here is a rough list of requirements for, say, a six months' trip in Northern Rhodesia, which is still a fine game country when one gets away from civilisation and main roads :

One or two rifles of the type preferred with spare strikers for doubles or falling-blocks, and striker springs for magazine rifles, slings, and spare front sights.

500 cartridges (100 solid, 400 expanding).

1 cover with sling for each rifle (fitted with a button, not a buckle).

1 nickel funnel for cleaning rifles with hot water.

1 lot oil and rags (" 3 in 1 " and " Motti paste "), screw tops on tins.

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- 1 cartridge bag (strong canvas), with outside pocket for note-book,
 &c.
- 1 " Bushman's Friend " knife in sheath.
- 2 strong pocket knives (with one large and one small blade each).
- 2 skinning knives with emery sharpener.
- 1 large tin alum and saltpetre mixed, for skins.
- 1 tape measure (steel) 6 feet. (If a 10 ft. one all the better.)
- 1 small axe.
- 1 binoculars in case with sling. (To choice.)
- 1 waterbottle with sling (enamel ware best).
- 1 candle lamp, spare glass or talc sides, in case.
- 1 lot tools—2 screwdrivers (large and small), 1 pliers, 1 small saw,
 1 smooth file, 1 gimlet, 1 coil copper wire, 1 small lot short
 and long French nails, 1 sharpening stone, 1 spokeshave
 (back of axe does as hammer).
- 1 lot writing paper, lead and indelible pencils, envelopes, note-
 books, and india-rubber.
- 1 lot reading matter (according to taste).
- 1 " X " bed with small-mesh mosquito net and fixings.
 (N.B.—Sandflies get through ordinary mosquito netting.)
- 1 " X " table.
- 1 folding canvas bath (or a big tin bath is just as good, made with
 a cover for carrying clothes, etc.).
- 1 deck-chair (strong canvas).
- 1 tent, as preferred. " Whympers " recommended if one load
 tent wanted.
- 3 warm blankets (these should be of wool and best quality).
- 1 waterproof sheet.

- 1 enamel wash-basin.
- 1 large camp kettle.
- 1 small aluminium kettle.
- 1 large frying-pan.
- 2 or 3 aluminium cooking pots (in nest).
- 2 cups (1 china, 1 enamel ware).
- 2 saucers for above.
- 3 or 4 enamel plates.
- 2 knives, spoons, and forks.
- 1 kitchen knife and 1 large spoon.
- 12 packets hard candles.
- 12 packets matches.
- 1 large bag common salt (can be bought in all African stores).
- 1 lot food-stuffs, such as flour, biscuits, tea, coffee, cocoa, sugar, salt, pepper, mustard, tinned foods, dried fruits, etc., according to wants.
- Requisite wooden boxes with locks, to carry stores.

There is no limit, except the one of cost, as to how much, and in what variety, a man can equip himself. In my trips I only took enough to load up about a dozen carriers, and when I ran out of flour, tea, sugar, candles, &c., used to send two or three carriers to the nearest store to buy more. An unladen native can walk about thirty miles a day with ease, so it was not necessary to wait long for their return. They usually returned as fast as they went, so as not to miss the gorges on meat they knew awaited them.

Although I always made myself as comfortable as circumstances permitted, and the knowledge of how to do so only comes with

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experience, I was never able to afford doing things in the grand style, like some of the parties I have heard of who start out for a trip in British East Africa (now Kenya) with cases of whisky, champagne, caviare, *pâte-de-foie-gras*, and other luxuries.

I always believed in roughing it so long as it did not affect the health, for it must be remembered that tropical Africa is not, and never will be, a health resort.

Tea is the best drink for the hunter, and I used to drink probably too much of it. It should be taken with plenty of sugar, as there is nothing like sugar, in my opinion, for making good loss of energy due to really strenuous exercise..

Here are a few tips on various subjects of vital interest to the hunter :

Footwear.—This should be strong, but light. In the dry season rope-soled shoes or boots grip well, but when they get wet are useless as they then get hard and uncomfortable. I liked light boots with what are called “elk-hide” soles, but had ridges of leather put on to prevent slipping. Rubber soles are too hot and cut to pieces in no time, and, moreover, are expensive. A pair of slippers are comfortable in camp, and it is a great relief to change one’s footgear after a heavy day. No man can hunt well in heavy, tacketty boots such as are used at home, as they are much too noisy for stalking in. The “elk-hide” boots I mention have flat soles, which are much better than boots with thick heels. For sitting about in the evenings we used to get soft buckskin knee-boots, which prevent the attentions of the mosquitoes, as the ankles are among their favourite feeding-spots in humans. These were made at the Shupanga Mission Station on the Zambezi, which is now, I

believe, no longer there. A composition for soles called "Usk-hide" might do very well for hunting.

Blisters.—These often incapacitate the hunter and spoil all the early part of a trip until the feet harden. I often suffered badly from blisters after buying boots in Africa. I treated them by first pricking the blister and then soaking my feet in a basin of warm water, into which I had put a small handful of coarse salt and some alum. When the feet get chafed a good thing is to soap the inside of the socks or stockings before starting out in the morning. I have occasionally used vaseline and candle-grease, but this is difficult to get out of the socks afterwards.

Warm coat.—A tweed shooting coat is necessary in the cool of evening or in the cold of early morning, and an ulster would also be useful. I often used to use one of my blankets, and had an old one in the middle of which I cut a hole to pass my head through, and then fixed it round the waist with my belt. This made a warm wrap.

Knives.—The ordinary hunting knife sold by cutlers at home, with a solid and thick hard steelblade, is absolutely useless in my opinion, as once they get blunt it needs a grindstone to sharpen them properly. Some thin-bladed knife, such as the "Bushman's Friend," or "Green River" type, is much better as it can be sharpened on an emery stone.

Oily barrel of rifle.—It is a mistake to leave much oil in the barrel after cleaning, as the nickel-covered bullet of a H.V. rifle is almost certain to go very high with the first shot. Many unaccountable misses have taken place from this cause, so always, before starting out in the morning, pass a bit of dry cloth or flannel through the bore to remove all the oil. I always cleaned my rifles myself and

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never allowed a native to do so, for they are rough-handed and careless, and will inevitably do damage of some kind, such as knocking off the front sight, which is their commonest mistake. Remember to take spare front sights and striker springs for magazine rifles. If doubles, or single falling-blocks are used, spare strikers should be carried.

River trips in dug-outs.—When intending to travel far on a river or lake in a dug-out it is wise to hire two, and put half the essentials into each, as an angry hippo might sink the vessel and leave one stranded without a scrap of kit in the wilds.

Clean water from dirty pool.—If water is found to be dirty, or one has a suspicion that the natives have been bathing in it, dig a hole about 3 feet from the edge of the water and wait for it to percolate through the sand or earth, which will act as a natural filter. In rock pools this is naturally impossible, and then if not used as tea it is better to boil the water before drinking it.

In belt pouch.—A pair of fine tweezers and a small magnifying glass are very useful for removing thorns, as they are sometimes driven in deep. I carried them on my belt with some permanganate of potassium, which should be used for cuts.

Hats.—A solar topee I found useless, as it is always being knocked off, or tilted over the eyes in stalking game. A soft grey, or brown, double "Terai" felt hat is much more comfortable, and don't forget in great heat to put a bit of a plantain leaf in the crown. If none can be got, soak a clean handkerchief, or a sponge, and use one of these instead.

Wind testing.—If one smokes, a pipe is as good as anything. I always carried a small bag with flour in it to shake. Feathers also

answer, but get packed in the pocket. Natives lift soft sand and drop it, and also pick grass and leaves and crush them up fine before they let them fall. A piece of dry cotton wool, picked fine and then dropped, is also efficient for the purpose. Instead of flour, fine wood ash does very well.

Testing eggs.—When buying or bartering eggs from the natives they will often try and palm-off the type generally associated with election meetings at home. A certain way of finding out whether they are eatable is to put them into a basin, or bowl, of water and watch their movements for a little. The rotten ones immediately bob to the top, and the doubtful ones instead of lying resting on their sides at the bottom tilt upwards. All these should be eliminated if one wishes to enjoy next morning's breakfast!

Pests.—The worst pests in tropical Africa are mosquitoes, rats, white ants, sand-flies, soldier ants, and tsetse flies. The latter are the most dangerous to man; I have given a few notes elsewhere regarding the connection of these flies with game, and the fallacious idea that slaughtering the fauna will eliminate the tsetse.

Always use a mosquito net when there are mosquitoes about, and get one with a small mesh which will keep out sand-flies, as near rivers these are often troublesome.

Rats and white ants do much damage to one's goods when living in a wattle-and-daub hut, so shut in boxes all valued goods such as leather things, books, and so on. Never leave boxes on the mud floor, but put stones, bricks (if procurable), or logs for them to rest on. Bottles on end, let into the mud floor when making it, are the best, and if the floor is already hard dig holes for them and plaster them in. Soldier ants often get into the hen house and may kill

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fowls, chickens, and ducks ; and I have seen a big goat and its kid finished by them. I have also seen a swarm of bees kill a number of fowls, and sting others so badly that they had to be put out of pain.

If attacked by a swarm try to save the neck and behind the ears, as these are the most dangerous parts to be stung. Mr. Abel Chapman, in his interesting book, *Savage Sudan*, mentions nearly being killed by a swarm of bees he disturbed, and he suffered intensely for some time.

When tea-planting in Eastern India I heard of two cases of coolie women pluckers being killed, one by bees, and the other by small brown hornets. These small hornets are most pugnacious insects, and I shall never forget the pain caused by two stings I got from them, one behind the ear and another below the ear on the opposite side. It was like liquid fire running through the veins, and the poison caused great pain in the brain. I should imagine half a dozen such stings in the neck would likely prove fatal, especially if a person happened to be in bad health at the time.

Snakes often come into the thatch of a wattle-and-daub house to catch the rats which always infest it. At night one will often hear a chase going on—the scampering of the rodent along its run, and the loud rustling of the snake in pursuit. One seldom sees the snake, as it usually keeps quiet during the day. The best way to prevent snakes falling inside is, when building the hut, to see that a covering of closely-bound reeds is put below the thatch. Another plan is to make a ceiling by stretching calico sheeting below the thatch, which keeps bits of grass and dirt from falling into the room, as well as snakes, &c.

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It is wise to keep jam, butter, and sugar in pots with screw tops, or air-tight tins do very well. A tin of preserved milk should be emptied into such a receptacle as small ants, flies, and all kinds of insects soon come to feed on sweet things. Attention to all such details means increased comfort.

Preserving trophies.—After shooting an animal it is useful to know how to remove the head skin correctly, as if this work is left to the natives it will usually (unless they have been properly trained) be done wrong.

Always cut off the mask right down to the body, so that the taxidermist, when mounting it, will have plenty of material to work on. A trophy on the wall with an abbreviated headskin does not look natural.

It is best to make the first cuts oneself, and cut the skin around the bases of the horns as close as possible, without, of course, injuring the thin bases.¹ After going round each horn cut the intervening inch or so of skin across and then down the neck on the top, right down to the shoulder cut. This is better, I think, than cutting a long slit so as to allow the horns and skull to get through, as it permits the mask to be flattened out for drying afterwards. Great care has to be taken when cutting through the cartilage of the ears, round the eyes (the most difficult places), and the nostrils.

Should the young hunter intend to take many trophies he would be wise to get a few lessons from a good taxidermist at home, especially if he intends to take full skins as museum specimens. To take a full skin the animal is stretched on its back, and a cut made from under the lower jaw right to the anus, going round,

¹ The largest of game can be efficiently skinned with a small blade of 2 inches in length.

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and not through, the testicle bag in the male. Then the leg cuts are made inside so that they will show the sewing as little as possible in a set-up specimen.

With regard to the cut starting from about 2 or 3 inches behind the lower jaw lip, some people advise beginning this farther back and at the top of the gullet, but this, in my opinion, does not allow the whole skin to be properly opened out to dry, and forms a bag, so to speak, in which noxious insects, such as the Bacon beetle, can harbour.

All skins should be dried in the shade; but hot weather is necessary, preferably with a breeze. I used to get the natives to rig up a rough shelter with a platform high enough to prevent the ubiquitous hyena from taking skins and skulls. Thick skins, such as eland and buffalo, should be thinned down with a knife, especially on the shoulder, and back where they are very thick. It is extremely difficult to get the skins to dry in rainy, damp weather, and in such spells I have put the skins on the platform and kept fires going underneath.

When full skins for mounting are taken these cannot be pegged out like those required for rugs, and they have to be cured and dried unstretched; so get very stiff and crumpley, and also shrink to about a half their original size. After the taxidermist has soaked them they easily stretch again to the required dimensions.

Careful measurements should be taken before the skin of an animal is removed, such as full length from nose to root of tail, round neck, behind skull, at middle, and at the base, round body in three places, round fore and back legs, as high as possible, standing height between two pegs straightly set, one at top of withers and the

other at flat of the fore leg, the limb being held as naturally as possible. These measurements should be sufficient for the taxidermist.

Clean skulls of all flesh and cartilage, particularly removing brain, or the skull will become a seething mass of maggots in a short time. Some people bury a skull in an anthill, or put it in a stream; but I do not advise this method on account of hyenas, and other night prowlers which may remove the trophy.

Never pack skulls and skins in the same package, or insects will ruin the latter. They should always be kept well apart.

After cleaning a skull as well as is possible I used either turpentine, or native-made castor-oil, freely on the skulls, rubbing down the horns well so as to prevent the borers from puncturing them.

Turpentine or castor-oil should not be put on the hairy side of skins as they are both too sticky and will spoil them. Skins can be quite well cured with common¹ salt mixed with wood ashes from the camp-fire, but it is best to carry a large tin of burnt alum and saltpetre mixed together, especially for headskins. Arsenical soap is good, but nasty stuff to have about, and causes inflammation if it gets under the finger-nails, so when put on with the hands, the nails should be well cleaned with a brush, and it is a good thing before using it to fill one's finger-nails with soap, which keeps it out. Some people advise a small quantity of carbolic acid and also bichromate of potass for thick skins in the tropics; but I cannot say if these are efficacious, as I have never used them.

I think I have said enough on this subject to keep the young hunter right, but should add, as a final warning, that skins should always be kept quite dry, as nothing ruins them so much as damp.

¹ Do not use too much salt, as it is apt to wet the skin when it melts, and it is then difficult to dry the trophy well.

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Plenty of strong labels should be carried so as to mark every trophy distinctly, with a reference number to the notes taken in a small book. This is important.

Trophies adaptable for useful articles.—Elephant feet when cut long make stick and umbrella stands, and when short, coal-scuttles, flower-pot stands, &c. The molars can be made into paper weights and other objects. Rhino feet into boxes, ink-stands, lamp-stands, &c., and rhino skin into beautifully polished amber-like tables, and whips; but hippo skin is better for whips, as it is much thicker and less brittle. Elephant tail hairs can be made into rings, bangles, and so on, and there is an idea amongst young women that wearing them brings luck, but what kind of luck it is difficult to conceive! Such things should never be put into water for long.

The smaller hippo tusks, and warthog and bushpig upper tusches make into handles for sticks and doors, and the lower cutting tusches into wine labels fitted with a silver chain with names appended. But I could never afford to get many such things made, and I doubt whether any of them are worth the expense of making up, except the elephant and rhino feet, which are useful.

Jiggers.—The jigger, or burrowing flea, is a nuisance during the hot and dry season when there is a lot of sand about. The worst spot to get one is under a toe-nail, and the commonest place the sole of the foot.

This female flea burrows to lay her eggs in a small bag, and its first presence is noted by an itchy feeling. Then a magnifying glass is useful to find it and help with its extraction, which should be done with a sharp needle or knife, thoroughly cleansed before use.

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The natives are very expert at removing jiggers, as they suffer much themselves ; so it is best to ask one's boy to operate. He does not directly attack the small blackish spot which is the bag, but works all round, so as to loosen it before forcing it out. After it is gone, I sometimes, if the place was bleeding, put a small chip of permanganate into the wound, but if there is no blood the best thing is a touch of vaseline and boracic powder.

The white man usually gets jiggers by going about in bare feet, so it is best to wear slippers. It should be remembered in the tropics never to put on boots, shoes, or slippers without shaking them, as scorpions, centipedes, and even small snakes sometimes get inside. I never got bitten by a scorpion, but twice felt a centipede on putting on my boots without shaking them.

Snake-bite.—I have always thought that one had a greater chance of being bitten by a venomous snake in Central Africa than being mauled by some dangerous animal, as one is always, even in a tent or mud hut, liable to such an accident. I have had five narrow squeaks from dangerous snakes ; three from puff adders, one from a black mamba, and one from a snake the natives call *M'buvi*, which I could not classify, although the natives told me it was extremely poisonous and certain death to be bitten by it. As I mention in a previous chapter about snake stories, and their unfortunate tendency of straining the credibility of the reader, I shall desist telling them. After all, a miss is as good as a mile !

The only thing to do is to tightly tie two ligatures between the wound and the heart, making a deep incision in the direction the tendons run, and squeeze out the blood profusely. Applying suction with the lips might help to draw out the poison, making sure, of

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course, there is no exposed cut on the lips or in the mouth. Permanganate of potassium crystals should be forced into the wound, so it is a good thing to carry some in an empty cartridge case, or buy a little boxwood holder with a screw top at each end, one side having a small lancet, and the other space for the permanganate.

Illness and medicines.—Any medical book on tropical complaints will give much better information on this heading than I am capable of supplying.

The principal drugs which should be taken are permanganate of potassium, quinine, phenacetine, boracic powder, vaseline (this also does for rifle cleaning), toothache cure, chlorodyne, vegetable laxative, opium (1 grain tabloids), scissors, forceps, lint, boracic wool, caustic, hypodermic syringe, safety pins, plaster (adhesive), clinical thermometer, and a bottle of brandy.

I have done many trips with simply quinine, opium pills, phenacetine, vegetable laxative, permanganate, a clinical thermometer, and some lint and bandages contained in a small cigar box.

Most people who have had a lot of malarial fever get to know the treatment which best suits them. Keep going as long as possible, then lie down, take 10 grains phenacetine and tea as hot as can be swallowed, pile on blankets, and sweat it out. I think we used to take too much quinine, as besides making one liable to blackwater, it affects one's hearing and digestion badly. I recovered from a bad go of blackwater at Mzazas, on the Loangwa River, in 1905, and never saw a doctor. I got plenty of milk, fortunately, and drank it warmed up, and recovered in three weeks. I believe the great thing is to stimulate the kidneys. People who have led

a rough hunting life, are, when they get older, liable to suffer from rheumatism, for which there are many helpful drugs.

Wounds from game.—It is difficult to give advice to any one who may be mauled when he has no other white man with him to help, because the victim may be so damaged and knocked-out that he is quite incapable of helping himself. This risk is the only sound argument which can be brought against solitary hunting, for natives are practically useless except for rigging up a *machilla* (hammock on pole) and carrying the sufferer to the nearest government station, mission, or township. By that time the patient is probably either dead, or his wounds have become septic. That is why I recommend some opium pills to be taken, as I have heard of several men who were severely injured by elephant, buffalo, and lion, who suffered agonies before they reached medical aid.

If *compos mentis* the injured man should first press in some permanganate crystals right to the root of the wound, so as to prevent blood-poisoning, particularly when the wounds have been caused by a carnivorous animal, as their teeth and claws are invariably septic. If the bleeding is profuse, a ligature should be put on, and this can be made of anything, such as a strong handkerchief, a piece of cord, or a rifle sling. Tie first loosely, so as to get a short stick in to twist the binding after a stone or piece of wood has been placed over the artery, or vein, that has been punctured. Before one becomes too light-headed send a couple of men off to the nearest white man for help, and in new countries all Europeans will do their best in such cases to aid the sufferer.

When hunting game many miles from medical aid everyone must face the risks of a mauling, but it does no man much good

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to be always contemplating an accident which may never happen. Still, the risks are always present, so don't forget the opium. It should never be taken, however, for instilling "Dutch" courage, as I have heard of it being used before tackling elephant by a man who was nervy when close to them.

It is useful in cases of bad colic, such as a slight inflammation of the bowels after drinking cold water from a mountain stream when one is heated.

Big game charging.—Some men seem to get charged more than others, and cinema-photographers appear to experience an unfair number of these incidents, for one sometimes sees pictures of a herd of elephants ambling peacefully along, which the letterpress adjoined describes as a fierce charge! A herd of elephants or buffaloes may stampede towards the hunter or photographer, but these are anything but *bona-fide* charges, for the animals are simply trying to escape. A real charge is one made with intent to do harm, and herds of game do not advance in a body with this object. Of course, one may be trampled, and tusked, or gored by a passing animal which has got close, but when stampeding game comes down like this simply lie low until they are fairly close, and then jump and wave one's hat and arms, and ninety-nine times out of a hundred the animals will split up and pass to either side. If a certain animal, instead of sheering off, comes straight at one, which is always possible, then shoot hard at him.

When following elephant in thick bush, or large patches of tall reeds or grass, after a shot, the animals get flustered and may run anywhere. The worst places are thick reeds and grass, where one cannot see ten yards ahead, and one will likely be on an elephant

path. If one sees a herd running wild in this stuff step off the path, for the animals will likely choose it if coming in your direction. In a real charge of a single beast, with a magazine rifle never expend more than three cartridges, but keep two as a last resource and use them carefully. Should one have expended, say, four cartridges, leaving one in the rifle, and sees the animal stop and try to get the wind when about 30 yards away, eject the last cartridge and slip in a full clip, but do it as quickly as possible. Then one is better prepared for eventualities, and having a good reserve can start firing again with more confidence of getting the best of it.

I can imagine people who have not shot elephants smiling at this advice, but I can assure them there is nothing unusual about it, as such an incident has occurred to myself and to other men I knew.

Best position for steady shooting.—The steadiest position I found was to take a rest against a tree, taking care that the rifle does not touch it by getting the fore-end of the weapon in the loop of the left forefinger.

Sitting is good when the intervening cover is not in the way, which it usually is, unless one is on high ground, or at the top of an anthill. Some people prefer standing, and I knew one elephant hunter who carried a pair of sticks riveted at one end to leave a fork for the rifle to lie in. He bagged quite a number of elephants by shooting in this way, but I never fancied the method, so never tried it. On no account, when a rest is used, allow the barrel or any part of the weapon to touch it, as this causes "jump," which sends the bullet wide.

Making a bath.—If the hunter has not a canvas or tin bath he

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can make quite a good one by getting his men to dig a hole and spread over it a big waterproof sheet.

Constructing a rough bedstead.—Get four Y-shaped poles about $2\frac{1}{2}$ feet long and sink them into the ground. Tie on cross-poles, and lace with leather thongs (riems), or rope. Some grass will make a soft mattress. A double canvas sheet also does, through which the side poles are passed.

A simple washstand.—Use three sticks put into the ground and tied in the middle. They are set at different angles and the basin will rest in the space at top.

Waterproof skin bags.—Goat or small buckskins, if well cleaned and sewn up, do very well for carrying native flour in, or for other things. The natives, when on trek (*ulendo*, journey), usually carry their flour in these receptacles.

Candle lamp from bottle.—Take an empty white bottle and tie a soft piece of string 2 inches from the base, the string being soaked first in paraffin oil. Set the string on fire and let it burn out, then give the bottle a sharp tap on wood, when it should split in half where the string was tied. Inverted, the neck will hold a candle, and the narrow end provide a handle for carrying this improvised lamp. To place it on a table a piece of wood with a hole bored in the centre makes a stand.

Tumblers can be made from old bottles, but in this case the sharp edges should be rubbed down on a stone to prevent cutting the mouth of the user.

Making a fire in wet weather.—It is often difficult when everything is damp to start a fire, and the natives are not always so clever at it as one would imagine.

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In the countries I write of there is usually a lot of fallen timber and branches lying about, and when the weather is dry there is no difficulty in getting a fire going quickly, but it is different in the rainy season. The best thing to do is to get a native to split a big branch, and then take a bit from the centre and make some shavings from it with an axe or knife. These will light better than soaked small twigs. In long rainy spells I have carried a fire-stick in an empty flour tin, and when stopping, at times, got a native to blow it into a flame. The natives themselves often carry a fire-stick so as to get their evening fire to cook their maize porridge.

In dry weather a magnifying glass and some fuse will soon produce a fire, so long as the glass is used before the sun has got low down on the horizon.

Removing thorns and splinters.—The white hunter and his men will often get a thorn or splinter into their legs, feet, or hands, and a magnifying glass is most useful to find these. If the slight operation draws blood it is best to put in a crystal of permanganate of potassium to prevent subsequent septic poisoning. For some reason the natives seem to be less liable to this than Europeans. Natives can stand injuries that would sicken a white man. For instance, I have often seen one of my carriers knock off, or badly split, a toe-nail on a rock or stump. The man usually gives a grunt, sits down, and tears a filthy bit of rag from his loin-cloth, and binds up the mutilated member, and then falls into line again, perhaps walking for miles before camp is made for the night.

Rope-soled or thin rubber shoes are often pierced by thorns, and I still have a piece of a long one I got into the sole of my foot in 1903, when coming down Zomba mountain. My companion,

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Mr. G. F. Manning (afterwards killed in the Great War, at Karonga), and myself were hurrying down to get to Zomba township before dark, and a thorn about 2 inches long went right through my rope-soled right shoe. Instead of taking the shoe off carefully I pulled it off with a jerk and the thorn broke in. That evening in my house at "The Camp," when trying to get out the remainder, it broke in, and a piece still remains in my foot.

There is a nasty tendril which grows amongst the grass and in the dry weather fades to a straw-colour. It is difficult to see, but can be felt, as it is covered with short, very sharp thorns. Many is the painful scratch and even cut I have got on my bare shanks from these growths. The best thing is not to try (at least with bare legs) to force through them, as they are fairly strong, and one should back a little and step over them. These tendrils are more plentiful in some parts than in others.

Chitaisi bean.—This velvet-coated bean when ripe and hanging in long grass with the least movement, or in a wind, drops many fine spikes, which, on hot flesh, produce a violent itch and rash. One cannot escape them, but I found a good plan was to go over the part they got on with my hunting knife, and then rub on some vaseline mixed with fine boracic powder. I have seen my own and others' bare legs scarlet with this itch, so it is best in country where the beans are abundant to shoot with the shirt sleeves down, and long trousers tucked into one's socks instead of bare limbs.

Early start.—It is most important to get away early in the morning, for the few hours after sunrise are the best time for tramping after game, or for a long journey. About 9 a.m. the sun begins to get hot and the temperature goes on increasing up to 4 p.m.

When some animal has been shot far from camp I used to get the natives to rig up a rough grass shelter where I lay and had some tea and food, which one of the men carried in a basket, as well as a big gourd of water carried by another man, which I divided amongst the party. Then about 3 p.m. we would make for camp, the men who came out empty-handed carrying the game. If the animal was a medium or small-sized buck it would be slung on a pole and carried by two men whole, and skinned in camp, but if a large beast I would generally skin and cut up the meat where it had fallen, and this would be transported in the same way.

Tea, sugar, and honey.—I always found tea with plenty of sugar most strengthening and invigorating, and I do not know what the African hunter would do without tea; and regarding sugar, I am certain that when one is going in for very strenuous exercise it supplies a loss in vitality. When sugar is scarce the natives can often procure honey by finding the hives in the trees, and I have seen them attracted to these stores by the honey-bird.

The natives often remove it carelessly, getting wood chips into it; but after I told them to be careful, they used to bring it to me clean in a piece of bark.

Often there are maggots in it, which I did not fancy, but my men seemed to like them. Many is the feed of fresh honey I have had in the African bush, and I have used it often for sweetening my tea, although it was not quite so nice for this purpose as sugar.

What to do when lost in the bush.—First, never leave camp without a rifle and cartridges, the means of making a fire, and a good knife. When lost do not get flustered (easier said than done), but sit down and quietly work the thing out so far as is possible. A compass is

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quite useless unless one has been making a fairly straight course for a certain point, which one seldom does when hunting game.

When one gets into a country which is unknown to one from previous experience it is best to have one (or more) local natives as a guide, and most men who hunt in Africa have a villager with them who knows the surrounding country for many miles around his village. I was fond of strolling about by myself, and before leaving camp I always told my natives that if I did not get back by dark I would light a fire and fire two shots in quick succession if I wanted help. Never did I need to do so, because I was careful in not going farther from camp than enabled me to get back by dark, or soon after.

In country where there are prominent features, such as hills, the matter is fairly easy. It is in flat, heavily bushed country where men get lost. Shots fired in such a locality, although heard, might not bring help, because in thick bush it is very difficult for others to locate direction. When lost in thick country the best thing is to gather plenty of firewood to keep a fire going throughout the night, and, if possible, it is essential to get water, for thirst in tropical Africa is much harder to bear than hunger.

Next morning stay where one passed the night if water is available and make a smoky fire. This can be done by throwing green leaves on a bright fire, but if there is water then soak some withered, dry grass in the fluid and put it on the fire, and this will produce plenty of smoke. The highest point in the vicinity should, of course, be chosen for the fire. After that try and shoot something for food, which should not be very hard in a good game region in

Africa, for if no big animal is procurable there will likely be small buck, such as duiker, or oribi, in the vicinity.

It is essential after being without water for some hours to find it, and game-tracks may lead to it. The game often makes the more distinct tracks leading to water than they do when returning from it, as after drinking the animals are more likely to spread out to feed, so tracks of game moving in single file usually point towards water.

Many rivers in Africa dry up in the dry season, and although no water is found above the beds it can be obtained by digging in the sand or earth. When water is present or exists underneath the ground, the trees bordering rivers and streams are usually green, and where they are verdant there is sure to be water, if not on the surface, then not far below it.

Certain species of game denote the presence of water, and if waterbuck, puku, reedbuck, impala, and warthog are seen one may be sure the precious fluid is not far distant, although it may be difficult to find. Tropical Africa is full of native paths leading between villages, so if one can find one of these a walk of some miles will probably take one to a human habitation. The main point in such a hot country as Central Africa is when one has found water to stay there until help arrives, unless one can find a native path, and find the true direction to camp. The sun will show points of direction early and late in the day when it is fairly low in the horizon. Few hunters know the stars as an aid to direction, and a compass, as I have mentioned, is little use when devious ramblings are taken. The great thing is to take plenty of ammunition with one (at least twenty cartridges), and use them sparingly and trust to a bright

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fire at night, or a smoky one by day, as a signal to one's followers.

The best type of shotgun for shot and ball.—A hammerless shotgun is best, as natives are less likely to cause an accident with one than they may do with a hammer gun. The safety-bolt of a hammerless weapon should have a non-automatic catch, which means it is in the firing state after opening the breech. Accidents have occurred through the sportsman, when excited, or in a hurry, omitting to push the catch forward, when, of course, the locks are jammed. A shotgun is best with cylinder-bored barrels, so that a spherical ball can be fired from both tubes. See that the mould is made to cast a tight-fitting ball, which tends to accuracy, when a gun will perform well up to 50 yards or so. When the bullets are slack wrap them in a piece of thin chamois leather, or a bit of a thin glove, which improves their accuracy.

Buckshot (S.S.G.) is useless as a stopper much beyond 10 yards, but up to this range it should stop a charging lion or leopard, and possibly the latter could be brought down at 15 yards or so. There has been a lot of nonsense written by some people lately, in a sporting newspaper, about buckshot being capable of killing a lion up to 50 yards. I seriously advise all young sportsmen not to credit this fallacious statement, for if he does try to kill a charging lion with buckshot at over a few paces, the funeral will be his and not the lion's.

When loading ball in a shotgun cartridge case do not turn it over as is done over shot, but after pushing the ball down pour in some melted beeswax, tallow, or candle grease so as to hold it. No wad should be put over the bullet, or this may cause a burst if the gun is light.

For the carnivora, soft pure lead is best, but if the gun is used

for heavy-boned big game, the lead can have some tin or pewter added for hardness.

I do not recommend ball from an ordinary shotgun to be used for large dangerous game, such as elephants, buffaloes, and rhinos, as the powder charge is insufficient for adequate penetration. If a 12-bore cylinder-bored gun was made extra-heavy, say $7\frac{1}{2}$ to 8 lb., it would then shoot 4 drams (or an equivalent in nitro powder), and be quite capable of killing the animals mentioned with hardened spherical bullets.

I have tried various shot and ball guns, the names of which it is unnecessary to mention, but cannot say I liked any of them, as they are too heavy and badly balanced to be satisfactory as shotguns. They are popular in India, although more tigers and deer have been shot in that country with ordinary cylinder guns and round balls than with rifles.

For sitting up in a *machan* at night a shotgun with ball is the best weapon. I have a small hammerless non-ejector, smooth 16-bore, by Purdey, which shoots ball excellently, and for any one liking a light gun a 16- is as good for most purposes as a 12-bore. For a wild country a hammer weapon does quite well if money is scarce, and it is possible to get a second-hand best quality hammer shotgun for from £12, by a first-class maker, and a well-made new weapon can be bought with nitro-proved steel barrels for such a sum, which will do very well for rough work abroad.

“*Rook rifles.*”—In my chapter on rifles I did not say anything about the small weapons called, for some reason, “rook and rabbit rifles.” One of these, such as a .220 rim fire, or a .250 central fire, is very useful for killing guinea-fowl, pigeons, duck, and other small stuff for the pot. When I found it necessary to kill a goat

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or sheep I first put a bullet into the animal's brain to save the creature suffering from the cruel methods of the natives, who usually use a blunt knife, and for killing fowls and ducks I made them use an axe for the same reason.¹

I have also finished-off small antelope with a B.S.A. .220 rifle so as to save more expensive cartridges, when I did not wish to keep the skull and horns, and the best spot is behind the ear, or at the back of the skull where it joins the vertebræ.

For a man going on a long trip I found such a small rifle was preferable to a shotgun, as a few hundreds of the miniature cartridges weigh so little in comparison to heavier and more bulky shotgun ammunition.

Practising range-finding.—It is an excellent plan to take every opportunity of finding the distances of objects, so when walking about it is a good thing to spot a tree, rock, or anthill, and guess the distance, and then step it, to find out how near one can get to exactitude. It is extraordinary how certain atmospheric conditions affect the human vision in this respect. Once I mistook a warthog for a buffalo as it was standing amongst some trees, and remember there was a thin misty haze at the time. Again, on the Zambezi, when travelling in a native dug-out, I also noticed a stork which appeared as large as an over-sized ostrich.

Probably this effect may at times make objects appear nearer than they are. In tropical Africa it is, however, more usual, on account of the rarity of the atmosphere in the dry season, to under-

¹ Having finished many beasts with a knife, or got my natives to do so, I gave it up because it causes needless agony. I am in full sympathy with those who, like my friend Mr. J. A. S. Barrett, recommend the use of the humane pistol, as there is no sense or reason for causing dumb creatures more pain than is necessary; and cold steel is an atrocious method when kindlier ways are available.

rather than over-estimate distances when shooting at game. After dropping an animal in its tracks, when walking up to it step the distance, which is a good check.

Nitro powders, I may say, are apt to develop a flatter trajectory to bullets in the tropics than they do in Britain and other cold countries, which often means shooting over, until one has got to know one's rifle thoroughly with regard to the proper sighting required.

Picking carriers.—When choosing my carriers out of a gang who had come to go for a long trip, I always preferred the thin, lightly-built, wiry men to the more massive type, because the former last better in long-continued and strenuous marching in Central Africa. A doctor once told me the reason wiry, hard-looking fellows were better than the more robust, big-muscled men, was, that muscle varies in type, and it does not follow that quantity is thus better than quality. I believe explorers in cold countries, as well as in hot, have found this to hold good, and from my own experience in the tropics of Africa and India I corroborate this opinion of my medical friend. I think the same thing has been found with regard to comparisons between regiments of various sized men in the Army, when soldiers are subjected to long periods of strenuous marches on small commons, and be this so, or otherwise, I know that in Africa I found the wiry-looking natives much the harder and tougher.

Treatment of the native.—This is a ticklish subject, especially to-day, when sentiment is apt to overcome rationalism.

The first point with natives is never to break a promise given, whether it refers to a present, a rise of pay, a holiday, or anything else, including a punishment.

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Our reputation as a colonising nation was largely founded on our trait of good faith with the indigenous inhabitants of the many countries now flying the Union Jack.

It takes years of experience to understand the natives, and men who have lived for a quarter of a century among them have admitted that after that period they understood them little better than they did at the beginning, and could not predict, with any certainty, how they would be likely to act under given circumstances. This, of course, is due to the fact that natives are much like children, and act on impulse and not reason.

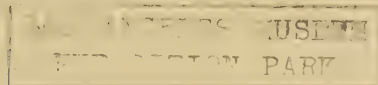
The great thing in one's dealings with them is, as I have said before, to keep one's word, and other important points are not to treat them too familiarly, and to also show them that a white man is not afraid of them, or anything else ; for all the finer tribes have a great respect for fearlessness and manliness.

Of all the tribes I came across I liked the Angoni, Awemba, and Ajawa (*Yaos*) best, but have known some fine men amongst the Achewa, Achikunda, Atonga, and Ananja.

They are happiest on hunting trips, for they love the excitement, and also the meat and fat ; so a white man known as a successful hunter has little difficulty in getting good men.

Having many memories of their faithfulness and hardihood when they accompanied me on numerous hunting trips in the African bush, I can appreciate their finer qualities. Some of them are most courageous fellows, and the records of big game hunters, and the history of their achievements as soldiers in the King's African Rifles, are enough to show that many of the races of tropical Africa are hard to beat for staunchness and toughness. But they are at

their best when simple and unsophisticated, for too much of our so-called civilisation is bound to spoil them irretrievably. People who have not lived amongst them may deny this, but all men with large experience are of the opinion that the only way to manage the natives is to maintain, at all costs, the prestige and authority of the whites, for once we allow these to lapse grave trouble is sure to arise. They should be treated with full justice, but to admit them to any equality in government will only lead to disaster, because they are utterly unfit for such responsibility in their present state of development. Moreover, such an insane proceeding on our part would not be interpreted as kindness, but as pusillanimity, and weakness in any form is not a thing they admire or respect in their rulers.



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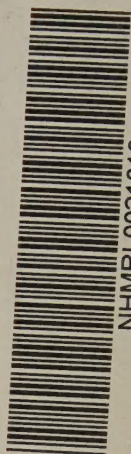
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